

# You Cannot Swim Twice in the Same River: The Genesis of Dialectical Materialism

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January 2013

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## The Genesis of Dialectical Materialism

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**Abstract:**

This constitutes a chapter of a book on '*Poverty of Communism: The Game of Filling in the Marxian Blanks*'. Dialectical materialism is the world outlook of Marxism; it is so called, because its approach to the phenomena of nature is *dialectical*, and its interpretation of these phenomena, its theory, is *materialistic*. Though the term 'dialectical materialism' owes its origin to Plekhanov and Lenin, its first expositor was Engels, who simply called it 'modern materialism' and asserted that it was essentially connected with the name of Marx. The present paper traces out the historical development of dialectical materialism, starting with its Greek philosophical origin in Heraclitus, who stressed the unity of opposites in a world of change, and passing through the dialogues of Socrates, and logic of Aristotle, Kant, Hegel, Chalybäus (famous for his exegetical characterization of Hegel's dialectics in terms of *thesis-antithesis-synthesis triad*) and Feuerbach, all culminating in Marxism. The paper also discusses the experimental games of Lenin and his followers in filling in the Marxian blanks in dialectical materialism.

# You Cannot Swim Twice in the Same River:

## The Genesis of Dialectical Materialism

**Vijayamohanan Pillai N.**

> "And so with dialectic; when a person starts on the discovery of the absolute by the light of reason only, and without any assistance of sense, and perseveres until by pure intelligence he arrives at the perception of the absolute good, he at last finds himself at the end of the intellectual world, as in the case of sight at the end of the visible."
>
> Plato, *The Commonwealth*

As we have already noted, dialectical materialism is the world outlook of Marxism; it is so called, because its approach to the phenomena of nature is *dialectical*, and its interpretation of these phenomena, its theory, is *materialistic*. Though the term 'dialectical materialism' owes its origin to Plekhanov and Lenin, its first expositor was Engels, who simply called it 'modern materialism', though he firmly asserts that it "is essentially connected with the name of Marx." (Engels 1886 [1970]). It goes without saying that the oldest and most authoritative exposition of the doctrine appeared in Engels' *Anti-Dühring* (1878). Another important sourcebook is his *Dialectics of Nature*, written during 1873 – 1886 and published posthumously only in 1925. It is widely accepted that *Anti-Dühring* has been second only to *Capital* in boosting the dissemination of Marxian thought. The Italian Marxist theoretician, Antonio Labriola (1843-1904), wrote that this work is "the most accomplished work of critical socialism and contains in a nutshell the whole philosophy required for the thinkers of socialism" (Labriola 1897), and that "This work of Engels remains the unexcelled book in the

literature of socialism" (Part 4). According to Lenin, *Anti-Dühring* "is a wonderfully rich and instructive book", "analysing highly important problems in the domain of philosophy, natural science and the social sciences" (Lenin 1895). However, it should be noted that dialectical materialism as formulated in *Anti-Dühring* has been traditionally regarded as the joint contribution of Marx and Engels. Engels himself admits:

> "I must note in passing that inasmuch as the mode of outlook expounded in this book was founded and developed in far greater measure by Marx, and only in an insignificant degree by myself, it was understood between us that this exposition of mine should not be issued without his knowledge. I read the whole manuscript to him before it was printed and the tenth chapter of the part of economics (From the *Critical History*) was written by Marx, but unfortunately had to be shortened somewhat by me for purely external reasons. As a matter of fact, we had always been accustomed to helping each other out in special subjects." (Engels 1878 [1947].

The term 'dialectics' is derived from the Greek verb for 'to talk') and the preposition 'through'); the middle form means 'talking over', and means 'I converse or discuss or debate'. The adjective then means 'pertaining to dialectics, or to proficiency in dialectics'. In Greek philosophy the concept originally signified a 'quest by means of dialogue', as in the heuristic method of Socrates that found perfection in the dialogues (*Phaidros*) of Plato. The method consisted in competence in conversation, conducted in the form of a question-answer game aimed at bringing out the contradiction in the opponent's arguments and thus reaching consensus regarding *truth*. Thus dialectics implied opposites and contradictions. Heraclitus, who stressed the unity of opposites in a world of change ("All things come into being by conflict of opposites, and 'the whole' flows like a stream."), is commonly regarded as one of the pre-Socratic dialecticians. He hypothesized the oppositional processes as 'strife' and the apparently stable state, which he called 'justice', as a harmony of strife. He said: "Opposition brings concord; and out of discord comes the fairest harmony."

Aristotle, however, attributed the earliest use of dialectics to Zeno (c. 490 – 430 B. C.) of Elea, who defended the monistic doctrines of Parmenides through arguments based on paradoxes against opposing pluralist views. These paradoxes had the form of an antinomy, a special kind of *reductio* argument. That is, he sought to refute the hypotheses of opponents by drawing contradictory and thus unacceptable consequences from those hypotheses. Note that in the sense of the art of inference or argument based on reasoning, Zeno's dialectics is

synonymous with logic; for example, consider the law of formal logic known as ‘removing method’ (if *p* implies *q*, and *q* is false, then *p* is false).

The next historical turn was with the Sophists (the word is derived from the same Greek root as the words *sophia* (= ‘wisdom’) and *sophós* (= ‘wise man’), the first encyclopaedists of the ancient world and the first in the history of philosophy to emerge as paid teachers of wisdom. They became the founders of the art of rhetoric, and they taught the free citizen of the city state to reason, to argue, to refute and prove, in short, to defend his own interests by rhetoric, public speaking, by ‘making the worse reason appear the better’, in order to win votes of the people (the *demos*), to obtain power by persuading the masses. Protagoras, famous for his humanism (“Man is the measure of all things”), was perhaps the greatest of the Sophists to employ this degenerate form of dialectic, which was called *eristic* and ridiculed by Plato (for example, in *Sophist* and *Euthydemus*). Aristotle also dealt with the Sophists’ deliberate use of invalid argumentation and sophistical tricks in his *Sophistical refutations*.

Unlike Sophists, Socrates used a refined form of the Zenonian paradoxes, called the *elenchus* (= ‘argument of disproof or refutation’), a prolonged argument that refutes the opponent’s hypothesis by getting him to draw from it, by means of a series of questions and answers, a consequence that contradicts it. The law of logic here is: “if *p* implies not-*p*, and not-*p* is true, then *p* is false”. Plato (through Socrates) put *dialektikê* above the Sophists’ *rhetorikê*. He introduced dialectics in Books VI and VII of the *Republic* as the power of thought capable of comprehending the highest level in the divided line of knowledge, that is, the intelligible world, the world of Ideas; in this sense, dialectical thinking is reason, which grasps the ultimate reality independent of the senses. He placed dialectics on top of other studies like a coping-stone, above which no other study could rightly be put.

Aristotle argued that the innovations that might justly be ascribed to Socrates were epagogic arguments and universal definition, as *elenchus* had already belonged to Zeno. In the logic of Aristotle, ‘induction’, (a move from particulars to the universal) is opposed to argument by syllogism, a logical argument in which one proposition (the conclusion) results of necessity from two assumptions (each called the premise). Note the core notion of ‘resulting of necessity’, which corresponds to a modern notion of logical consequence: *R* results of necessity from *P* and *Q* if it would be impossible for *R* to be false when *P* and *Q* are true. Aristotle considered dialectics in *Organon*, the standard collection of his six works:

*Categories*, *On Interpretation*, *Prior Analytics*, *Posterior Analytics*, *Topics*, and *Sophistical Refutations*, where formal logic emerged out of the dialectical logic of Plato.

With Aristotle, dialectics suffered a devaluation again, falling into the proximity of sophistry, from which Socrates (Plato) had earlier rescued it. Aristotle (in *Metaphysics*) tried to explain Plato's ontology through his method; Plato (according to Aristotle) introduced the notion of the Ideas on account of his preoccupation with dialectics. In Aristotelian logic, dialectics, on the other hand, was essentially a *téchnê* of persuasion, based on probable premises, in contrast to the *apodictic* scientific character of philosophy. Thus in the *Topics*, he defined a dialectical deduction as one in which its conclusion results of necessity from its premises, which are generally accepted. He often contrasted dialectics with demonstration, 'a deduction that produces knowledge', or 'scientific deduction', based on 'true and primary' premises. The *Posterior Analytics* contains his account (epistemology) of demonstrations and their role in knowledge. For him, science is knowledge of causes and in a demonstration, knowledge of the (true and primary) premises is what brings about knowledge of the conclusion. Thus the difference between dialectical arguments and demonstrations lies in the character of their premises, not in their logical structure. He also noted another equally important difference between the two methods: the premises of dialectical arguments are *questions*; there are two parties to a dialectical argument, the questioner and the answerer. In demonstration, on the other hand, one chooses as premises the true and primary propositions, *assertions*, that underlie the truth, without reference to any audience.

Euclides of Megara (c. 430 – 360 B.C.), a pupil of Socrates and the founder of the Megarian or Eristic school, also was a notable logician and his tradition was continued by the 'Dialectical school', a group of Megarian philosophers active from the later 4$^{th}$ to the mid 3$^{rd}$ centuries B.C., known as members of the Dialectic sect or as dialecticians. Clinomachus of Thurii (4$^{th}$ century B.C.), a pupil of Eubulides of Miletus, (4$^{th}$ century B.C., famous for his paradoxes), is regarded as founder of the sect; and the name 'Dialectical school' is said to have been introduced by Dionysius of Chalcedon, who flourished around 320 B.C. One of the two best known philosophers of the sect was Diodorus Cronus (4$^{th}$ century B.C.; the nickname *Cronus* = 'Old Fogey'). Notable for logical innovations, he proposed the problem of future contingents: identifying possibility with necessity, so that the future is as certain and defined as the past. He defined the possible as "that which either is or will be true" (Kneale and Kneale 1963), and the necessary as what is true and will not be false. The problem lies in its conflict with freedom, the power to determine the future course of events, which seems

impossible if what happens, or does not happen, was *necessarily* going to happen, or not going to happen.

His most famous pupil, Zeno of Citium, was the founder of the Stoic school. The other important philosopher of the Dialectical school, the logician Philo was also his pupil. With both the dialecticians and the Stoics (from the 3rd century B.C.), dialectics became a specialized discipline as a part of logic. Dialectics as the right discourse in the form of a series of questions and answers was distinguished from rhetoric in the form of uninterrupted monologue. Dialectics for them included the study of referential sounds (phonetics) and also the study of the meaning-relations of sounds. Objects of meanings were considered things themselves that lie outside language and dialectics is therefore concerned only in so far as they are expressed in languages.

'Dialectics' continued to be another name for logic in the Middle Ages also; thus *Da Dialectica* was the title of the first medieval logical treatise of Alcuin of York (730/740 – 804), English scholar and an important architect of the Carolingian Renaissance (a period of intellectual and cultural revival from the late eighth century during the reigns of the Carolingian rulers Charlemagne and Louis the Pious), and *Dialectica* was an important work of Pierre Abélard (1079 – 1142), French scholastic philosopher and logician, along with *Logic for Beginners* and *Logic in response to the request of our comrades*.

According to Hegel, dialectics had so far been "held to be merely the art of practising deceptions and producing illusions", and assumed to be "only a spurious game, the whole of its power resting solely on concealment of the deceit", yielding some "subjective illusion" as its results.

> "Kant rated dialectic higher – and this is among his greatest merits – for he freed it from the seeming arbitrariness which it possessed from the standpoint of ordinary thought and exhibited it as a *necessary function of reason*." (Hegel 1812 [1969]).

Kant in his *Critique of Pure Reason* asserted that the ancients had employed dialectics as 'the logic of illusion'. With him, however, 'dialectics' changed from an illusory logic to a theory of illusion. He distinguished the transcendental illusion from empirical illusion (for example, optical illusion) and from logical illusion:

> "Logical illusion, which consists merely in the imitation of the form of reason (the illusion in sophistical syllogisms), arises entirely from a want of due attention to

> logical rules. So soon as the attention is awakened to the case before us, this illusion totally disappears. Transcendental illusion, on the contrary, does not cease to exist, even after it has been exposed, and its nothingness clearly perceived by means of transcendental criticism. Take, for example, the illusion in the proposition: "The world must have a beginning in time." The cause of this is as follows. In our reason, subjectively considered as a faculty of human cognition, there exist fundamental rules and maxims of its exercise, which have completely the appearance of objective principles. Now from this cause it happens that the subjective necessity of a certain connection of our conceptions, is regarded as an objective necessity of the determination of things in themselves. This illusion it is impossible to avoid, just as we cannot avoid perceiving that the sea appears to be higher at a distance than it is near the shore, because we see the former by means of higher rays than the latter, or, which is a still stronger case, as even the astronomer cannot prevent himself from seeing the moon larger at its rising than some time afterwards, although he is not deceived by this illusion." (Kant 1787)

He titled the second division of his 'Transcendental Logic' that contains this element of his theory of knowledge as 'Transcendental Dialectic', concerned with exposing the illusion of transcendental judgments, that is, judgments thought to pass beyond the limits of experience:

> "Transcendental dialectic will therefore content itself with exposing the illusory appearance in transcendental judgements, and guarding us against it; but to make it, as in the case of logical illusion, entirely disappear and cease to be illusion is utterly beyond its power. For we have here to do with a natural and unavoidable illusion, which rests upon subjective principles and imposes these upon us as objective, while logical dialectic, in the detection of sophisms, has to do merely with an error in the logical consequence of the propositions, or with an artificially constructed illusion, in imitation of the natural error. There is, therefore, a natural and unavoidable dialectic of pure reason – not that in which the bungler, from want of the requisite knowledge, involves himself, nor that which the sophist devises for the purpose of misleading, but that which is an inseparable adjunct of human reason, and which, even after its illusions have been exposed, does not cease to deceive, and continually to lead reason into momentary errors, which it becomes necessary continually to remove." (*ibid.*).

At the start of Book II of the second division, Kant identified three classes of dialectic mistakes or illusions of transcendent knowledge: the *Paralogisms***,** the *Antinomies***,** and the *Ideals of Reason*. He wrote:

> "Of these dialectical arguments there are three kinds, corresponding to the number of the ideas which their conclusions present. In the argument or syllogism of the first class, I conclude, from the transcendental conception of the subject contains no manifold, the absolute unity of the subject itself, of which I cannot in this manner attain to a conception. This dialectical argument I shall call the transcendental paralogism. The second class of sophistical arguments is occupied with the transcendental conception of the absolute totality of the series of conditions for a given phenomenon, and I conclude, from the fact that I have always a self-contradictory conception of the unconditioned synthetical unity of the series upon one side, the truth of the opposite unity, of which I have nevertheless no conception. The condition of reason in these dialectical arguments, I shall term the antinomy of pure reason. Finally, according to the third kind of sophistical argument, I conclude, from the totality of the conditions of thinking objects in general, in so far as they can be given, the absolute synthetical unity of all conditions of the possibility of things in general; that is, from things which I do not know in their mere transcendental conception, I conclude a being of all beings which I know still less by means of a transcendental conception, and of whose unconditioned necessity I can form no conception whatever. This dialectical argument I shall call the ideal of pure reason." (Kant 1787)

In Chapter I of the Book II, Kant analysed the paralogisms of pure reason; he argued that transcendental illusion results from a failure to distinguish between appearances and things-in-themselves:

> "The logical paralogism consists in the falsity of an argument in respect of its form, be the content what it may. But a transcendental paralogism has a transcendental foundation, and concludes falsely, while the form is correct and unexceptionable. In this manner the paralogism has its foundation in the nature of human reason, and is the parent of an unavoidable, though not insoluble, mental illusion." (Kant 1787)

The next chapter dealt with the antinomy of pure reason, the conflicts of the transcendental ideas. For him, the antinomies were the unresolved dialogue between skepticism and

dogmatism about knowledge of the world. He identified four antinomies; each antinomy has a thesis and an antithesis, both of which can be validly proved, and since each makes a transcendental claim, beyond the grasp of spatiotemporal sensation, neither can be confirmed nor denied by experience. The four conflicts are:

(1) Thesis: The world has a beginning in time, and is also limited in regard to space.

Antithesis: The world has no beginning, and no limits in space, but is, in relation both to time and space, infinite.

Kant's observation: Both are false. The world is an object of experience. Neither statement is based on experience.

(2) Thesis: Every composite substance in the world consists of simple parts; and there exists nothing that is not either itself simple, or composed of simple parts.

Antithesis: No composite thing in the world consists of simple parts; and there does not exist in the world any simple substance.

Kant's observation: Both are false. Things are objects of experience. Neither statement is based on experience.

(3) Thesis: Causality according to the laws of nature, is not the only causality operating to originate the phenomena of the world. A causality of freedom is also necessary to account fully for these phenomena.

Antithesis: There is no such thing as freedom, but everything in the world happens solely according to the laws of nature.

Kant's observation: Both may be true. The thesis may be true of things-in-themselves (other than as they appear). The antithesis may be true of things as they appear.

(4) Thesis: There exists either in, or in connection with the world – either as a part of it, or as the cause of it-an absolutely necessary being.

Antithesis: An absolutely necessary being does not exist, either in the world, or out of it – as its cause.

Kant's observation: Both may be true. The thesis may be true of things-in-themselves (other than as they appear). The antithesis may be true of things as they appear.

Finally he observed:

> "The reader will observe in this antinomy a very remarkable contrast. The very same grounds of proof which established in the thesis the existence of a supreme being, demonstrated in the antithesis – and with equal strictness – the non-existence of such a being. We found, first, that a necessary being exists, because the whole time past contains the series of all conditions, and with it, therefore, the unconditioned (the necessary); secondly, that there does not exist any necessary being, for the same reason, that the whole time past contains the series of all conditions – which are themselves, therefore, in the aggregate, conditioned. The cause of this seeming incongruity is as follows. We attend, in the first argument, solely to the absolute totality of the series of conditions, the one of which determines the other in time, and thus arrive at a necessary unconditioned. In the second, we consider, on the contrary, the contingency of everything that is determined in the series of time – for every event is preceded by a time, in which the condition itself must be determined as conditioned – and thus everything that is unconditioned or absolutely necessary disappears. In both, the mode of proof is quite in accordance with the common procedure of human reason, which often falls into discord with itself, from considering an object from two different points of view. Herr von Mairan regarded the controversy between two celebrated astronomers, which arose from a similar difficulty as to the choice of a proper standpoint, as a phenomenon of sufficient importance to warrant a separate treatise on the subject. The one concluded: the moon revolves on its own axis, because it constantly presents the same side to the earth; the other declared that the moon does not revolve on its own axis, for the same reason. Both conclusions were perfectly correct, according to the point of view from which the motions of the moon were considered." (Kant 1787)

Kant was able to resolve the seemingly irreconcilable claims (thesis and antithesis) and to reject both the first two and accept the other two, by comprehending their origin in the conflict of the faculties and by recognizing their proper domains of knowledge. For all of the antinomies, the domain of the thesis is the intellectual, *noumenal*, world, while that of the antithesis is the spatiotemporal, *phenomenal*, world. He argued that rationalism developed by defending the thesis of each antinomy and empiricism, the antithesis.

Note that even though Kant, in his Transcendental Dialectic, had analyzed the antinomies of pure reason as four sets of 'thesis' and 'antithesis', he had not named his resolution of the antinomies a 'synthesis'. It was his successor Johann Gottlieb Fichte who, in his '*Foundations of the Entire Science of Knowledge*' (1794–95), first introduced into the German philosophy the triad or three-step of thesis, antithesis, and synthesis. Fichte, however, did not believe that antithesis could be deduced from thesis and that synthesis could achieve anything more than uniting what both thesis and antithesis had established. Also note that his conception was taken up by Friedrich Schelling, but not as such by G. W. F. Hegel, who, despite his fondness for dialectics, did not set it up in a triadic form. The triad was imposed on his philosophy in 1837 by the German philosopher Heinrich Moritz Chalybäus (1796–1862) in his exegetical work on philosophy *Historical Survey of Speculative Philosophy from Kant to Hegel*. Hegelian dialectics involved the process of the passing over of thoughts or concepts into their opposites and their attaining a higher unity. And even his doctrine that dialectics is not just a process of thought but also found in history and in the whole universe was not something new (as we will see in the next Chapter), and he himself recognized his predecessors in Heraclitus and the Greek Neoplatonist Proclus Lycaeus (412 – 485 AD).

Hegel regarded the "passing over into the opposite" as a natural consequence of the limited or finite nature of a concept or thing. The contradictions that emerge in this way in consciousness, nature, and society, according to him, lead, by a kind of necessity, to a further phase of development. He summed up his dialectics in these lines in *The Science of Logic*:

> "In the *Phenomenology of Mind* I have expounded an example of this method in application to a more concrete object, namely to consciousness. Here we are dealing with forms of consciousness each of which in realising itself at the same time resolves itself, has for its result its own negation – and so passes into a higher form. All that is necessary to achieve scientific progress – and it is essential to strive to gain this quite *simple* insight – is the recognition of the logical principle that the negative is just as much positive, or that what is self-contradictory does not resolve itself into a nullity, into abstract nothingness, but essentially only into the negation of its *particular* content, in other words, that such a negation is not all and every negation but the negation of a specific subject matter which resolves itself, and consequently is a specific negation, and therefore the result essentially contains that from which it results; which strictly speaking is a tautology, for otherwise it would be an

immediacy, not a result. Because the result, the negation, is a *specific* negation, it has *content*. It is a fresh Notion but higher and richer than its predecessor; for it is richer by the negation or opposite of the latter, therefore contains it, but also something more, and is the unity of itself and its opposite. It is in this way that the system of Notions as such has to be formed – and has to complete itself in a purely continuous course in which nothing extraneous is introduced." (Hegel 1812 [1969]).

At the start of his 'Preface' to *The Phenomenology of Mind* (1807) he had written:

"The more the ordinary mind takes the opposition between true and false to be fixed, the more is it accustomed to expect either agreement or contradiction with a given philosophical system, and only to see reason for the one or the other in any explanatory statement concerning such a system. It does not conceive the diversity of philosophical systems as the progressive evolution of truth; rather, it sees only contradiction in that variety. The bud disappears when the blossom breaks through, and we might say that the former is refuted by the latter; in the same way when the fruit comes, the blossom may be explained to be a false form of the plant's existence, for the fruit appears as its true nature in place of the blossom. These stages are not merely differentiated; they supplant one another as being incompatible with one another. But the ceaseless activity of their own inherent nature makes them at the same time moments of an organic unity, where they not merely do not contradict one another, but where one is as necessary as the other; and this equal necessity of all moments constitutes alone and thereby the life of the whole. But contradiction as between philosophical systems is not wont to be conceived in this way; on the other hand, the mind perceiving the contradiction does not commonly know how to relieve it or keep it free from its one-sidedness, and to recognise in what seems conflicting and inherently antagonistic the presence of mutually necessary moments." (Hegel 1807 [1967]).

According to him, the epoch signified "a birth-time and a period of transition", with both a quantitative and a qualitative change, "as in the case of the birth of a child". It goes without saying that this idea had an irresistible attraction for Marx and his followers:

"……. it is not difficult to see that our epoch is a birth-time, and a period of transition. The spirit of man has broken with the old order of things hitherto prevailing, and with the old ways of thinking, and is in the mind to let them all sink into the depths of the

past and to set about its own transformation. It is indeed never at rest, but carried along the stream of progress ever onward. But it is here as in the case of the birth of a child; after a long period of nutrition in silence, the continuity of the gradual growth in size, of quantitative change, is suddenly cut short by the first breath drawn – there is a break in the process, a qualitative change and the child is born. In like manner the spirit of the time, growing slowly and quietly ripe for the new form it is to assume, disintegrates one fragment after another of the structure of its previous world. That it is tottering to its fall is indicated only by symptoms here and there. Frivolity and again ennui, which are spreading in the established order of things, the undefined foreboding of something unknown – all these betoken that there is something else approaching. This gradual crumbling to pieces, which did not alter the general look and aspect of the whole, is interrupted by the sunrise, which, in a flash and at a single stroke, brings to view the form and structure of the new world.

"But this new world is perfectly realised just as little as the new-born child; and it is essential to bear this in mind. It comes on the stage to begin with in its immediacy, in its bare generality. A building is not finished when its foundation is laid; and just as little, is the attainment of a general notion of a whole the whole itself. When we want to see an oak with all its vigour of trunk, its spreading branches, and mass of foliage, we are not satisfied to be shown an acorn instead. In the same way science, the crowning glory of a spiritual world, is not found complete in its initial stages. The beginning of the new spirit is the outcome of a widespread revolution in manifold forms of spiritual culture; it is the reward which comes after a chequered and devious course of development, and after much struggle and effort. It is a whole which, after running its course and laying bare all its content, returns again to itself; it is the resultant abstract notion of the whole. But the actual realisation of this abstract whole is only found when those previous shapes and forms, which are now reduced to ideal moments of the whole, are developed anew again, but developed and shaped within this new medium, and with the meaning they have thereby acquired." (Hegel 1807 [1967])

Though Hegel found nothing praiseworthy about the Kantian antinomies of pure reason, the *objectivity of the illusion* and the *necessity of the contradiction* which Kant had introduced commanded his admiration. He elaborated in *The Science of Logic*:

"That which enables the Notion to advance itself is the …. *negative* which it possesses within itself; it is this which constitutes the genuine dialectical moment. Dialectic in this way acquires an entirely different significance from what it had when it was considered as a separate part of Logic and when its aim and standpoint were, one may say, completely misunderstood. Even the *Platonic* dialectic, in the Parmenides itself and elsewhere even more directly, on the one hand, aims only at abolishing and refuting assertions through themselves and on the other hand, has for its result simply nothingness.

"Dialectic is commonly regarded as an external, negative activity which does not pertain to the subject matter itself, having its ground in mere conceit as a subjective itch for unsettling and destroying what is fixed and substantial, or at least having for its result nothing but the worthlessness of the object dialectically considered.

"True, Kant's expositions in the antinomies of pure reason, when closely examined …., do not indeed deserve any great praise; but the general idea on which he based his expositions and which he vindicated, is the *objectivity of the illusion* and the *necessity of the contradiction* which belongs to the nature of thought determinations: primarily, it is true, with the significance that these determinations are applied by reason to *things in themselves*; but their nature is precisely what they are in reason and with reference to what is intrinsic or in itself.

"This result, grasped in its positive aspect, is nothing else but the inner negativity of the determinations as their self-moving soul, the principle of all natural and spiritual life.

"But if no advance is made beyond the abstract negative aspect of dialectic, the result is only the familiar one that reason is incapable of knowing the infinite; a strange result for — since the infinite is the Reasonable — it asserts that reason is incapable of knowing the Reasonable.

"It is in this dialectic as it is here understood, that is, in the grasping of opposites in their unity or of the positive in the negative, that speculative thought consists.

> "It is the most important aspect of dialectic, but for thinking which is as yet unpractised and unfree it is the most difficult. Such thinking, if it is still engaged in breaking itself of the habit of employing sensuously concrete terms and of ratiocination, must first practise abstract thinking, hold fast Notions in their *determinateness* and learn to cognise by means of them. An exposition of logic to this end would, in its method, have to keep to the division of the subject above-mentioned and with regard to the more detailed contents, to the definitions given for the particular Notions without touching on the dialectical aspect. As regards its external structure, such an exposition would resemble the usual presentation of this science, but it would also be distinguished from it with respect to the content and still would serve for practice in abstract thinking, though not in speculative thinking, a purpose which can never be realised by the logic which has become popular through the addition of psychological and anthropological material. It would give to mind the picture of a methodically ordered whole, although the soul of the structure, the method (which dwells in the dialectical aspect) would not itself appear in it." (Hegel 1812 [1969]).

In Hegel's monism, dialectic is characterized by its complete identification of the process of consciousness with the process of being. For him, if the Absolute must explain everything, it must not be just a pure identity, but a unity-in-difference, signifying the complete realization of the finite in the infinite, unity of the Subjective and Objective Idea. His logic was metaphysics itself: a philosophy of being as revealed through abstract thought. His starting-point was the concept of pure, absolute, indeterminate being, conceived as a dynamic process. He sought to trace the evolution of this dynamic process through three stages:

i) the stage in which it posits itself (as thesis);
ii) the stage of negation, a necessary corollary of the previous stage (antithesis) and
iii) the stage of union of opposites (synthesis).

Hegel starts with the bare notion of existence, or being, and argues that since this bare notion of being has no content at all, it cannot be anything. Thus it must be nothing, the antithesis of being. Being and nothing, however, are opposites, constantly moving in and apart from each other; they require to be brought together under the synthesis, becoming.

An illustration of the *a priori* dialectic process by which all the categories of thought and reality are evolved from the pure, indeterminate being is as follows. Every conception has within itself deficiency, and deficiency is negation; positing the conception of being involves its differentiation from 'nothing' and thus implies the negation of being. This 'being-nought' relation of affirmation leads by synthesis to a richer positive concept of 'becoming' or origination. In short, the process represents a game of thesis, negating antithesis, and the synthesis that negates this negation and *sublates* the opposition. (Note that the Hegelian term 'sublation' means to take something beyond its own limits and 'negating' it, that is to say, by *maintaining* what is necessary in the former relation while *terminating* that which is no longer tenable.) Thus Hegel was concerned with those common dialectical stages of life such as coming into being, growing, and passing away in both the realms of natural and intellectual life, which he illustrated with his famous 'bud-blossom-fruit' dialectics.

He discussed this 'being-nothing-becoming' relationship in detail in his *Science of Logic*, admitting his debt to the ancient predecessors.

> "It was the *Eleatics*, above all Parmenides, who first enunciated the simple thought of *pure being* as the absolute and sole truth: *only being is, and nothing absolutely is not*, and in the surviving fragments of Parmenides this is enunciated with the pure enthusiasm of thought which has for the first time apprehended itself in its absolute abstraction. As we know, in the oriental systems, principally in Buddhism, *nothing*, the void, is the absolute principle. Against that simple and one-sided abstraction the deep-thinking Heraclitus brought forward the higher, total concept of *becoming* and said: *being* as little *is*, as nothing is, or, *all flows*, which means, all is a *becoming*. The popular, especially oriental proverbs, that all that exists has the germ of death in its very birth, that death, on the other hand, is the entrance into new life, express at bottom the same union of being and nothing. But these expressions have a substratum in which the transition takes place; being and nothing are held apart in time, are conceived as alternating in it, but are not thought in their abstraction and consequently, too, not so that they are in themselves absolutely the same…..
>
> "It would not be difficult to demonstrate this unity of being and nothing in every example, in *every* actual thing or thought." (Hegel 1812 [1969]).

Engels (as we will see later on) talked about three laws of dialectics, namely, the law of the transformation of quantity into quality and *vice versa*, the law of the interpenetration of

opposites and the law of the negation of the negation. All three were developed by Hegel: the first, in the first part of his *Logic*, in the *Doctrine of Being* as well as in Section 108 of the *Encyclopedia*; the second in the second part of the *Logic*, the *Doctrine of Essence*; and the third as the basis of the whole system. Hegel tried to substantiate the first law in terms of proportions in the constitution of things and in the 'Remark', gave examples of water turning, at critical points (or "nodal lines of measure-relations"), into ice or steam, and of chemical combinations and constant proportions, which Engels and Marx repeated later. Hegel explained:

> "Here we have a measure relation, a self-subsistent reality which is qualitatively distinguished from others. Such a being-for-self, because it is at the same time essentially a relation of quanta, is open to externality and to quantitative alteration; it has a range within which it remains indifferent to this alteration and does not change its quality. But there enters a point in this quantitative alteration at which the quality is changed and the quantum shows itself as specifying, so that the altered quantitative relation is converted into a measure, and thus into a new quality, a new something. The relation which has taken the place of the first is determined by this, partly according to the qualitative identity of the moments which are in affinity, and partly according to the quantitative continuity. But because the difference falls into this quantitative aspect, the relation between the new something and its predecessor is one of indifference; their difference is the external one of quantum. The new something has therefore not emerged from or developed out of its predecessor but directly from itself, that is, from the inner specifying unity which has not yet entered into existence. The new quality or new something is subjected to the same progressive alteration, and so on to infinity." (Hegel 1812 [1969]).

Then he gave a large number of examples of such nodal lines in terms of the acquisition of new properties by numbers as the series of natural numbers develops; the acquisition of new features by the notes of a musical scale; chemical combinations; water changing into ice or steam; birth and death; a moral example, based on Aristotle, of slight changes that turn virtues into vices, carelessness into crime, etc. and a political example, borrowed from Baron de Montesquieu, of the relation of a type of constitution to the population of a state:

> "The system of natural numbers already shows a nodal line of qualitative moments which emerge in a merely external succession. It is on the one hand a merely

quantitative progress and regress, a perpetual adding or subtracting, so that each number has the same *arithmetical* relation to the one before it and after it, as these have to their predecessors and successors, and so on. But the numbers so formed also have a *specific* relation to other numbers preceding and following them, being either an integral multiple of one of them or else a power or a root. In the musical scale which is built up on quantitative differences, a quantum gives rise to a harmonious relation without its own relation to those on either side of it in the scale differing from the relation between these again and their predecessors and successors. While successive notes seem to be at an ever-increasing distance from the keynote, or numbers in succeeding each other arithmetically seem only to become other numbers, the fact is that there suddenly emerges a *return,* a surprising accord, of which no hint was given by the quality of what immediately preceded it, but which appears as an *actio in distans,* as a connection with something far removed. There is a sudden interruption of the succession of merely indifferent relations which do not alter the preceding specific reality or do not even form any such, and although the succession is continued quantitatively in the same manner, a specific relation breaks in *per saltum.*

"Such qualitative nodes and leaps occur in chemical combinations when the mixture proportions are progressively altered; at certain points in the scale of mixtures, two substances form products exhibiting particular qualities. These products are distinguished from one another not merely by a more or less, and they are not already present, or only perhaps in a weaker degree, in the proportions close to the nodal proportions, but are bound up with these nodes themselves. For example, different oxides of nitrogen and nitric acids having essentially different qualities are formed only when oxygen and nitrogen are combined in certain specific proportions, and no such specific compounds are formed by the intermediate proportions. Metal oxides, e.g. the lead oxides, are formed at certain quantitative points of oxidation and are distinguished by colours and other qualities. They do not pass gradually into one another; the proportions lying in between these nodes do not produce a neutral or a specific substance. Without having passed through the intervening stages, a specific compound appears which is based on a measure relation and possesses characteristic qualities. Again, water when its temperature is altered does not merely get more or less hot but passes through from the liquid into either the solid or gaseous states; these

states do not appear gradually; on the contrary, each new state appears as a leap, suddenly interrupting and checking the gradual succession of temperature changes at these points. Every birth and death, far from being a progressive gradualness, is an interruption of it and is the leap from a quantitative into a qualitative alteration.

"It is said, *natura non facit saltum* [there are no leaps in nature]; and ordinary thinking when it has to grasp a coming-to-be or a ceasing-to-be, fancies it has done so by representing it as a *gradual* emergence or disappearance. But we have seen that the alterations of being in general are not only the transition of one magnitude into another, but a transition from quality into quantity and *vice versa*, a becoming-other which is an interruption of gradualness and the production of something qualitatively different from the reality which preceded it. Water, in cooling, does not gradually harden as if it thickened like porridge, gradually solidifying until it reached the consistency of ice; it suddenly solidifies, all at once. It can remain quite fluid even at freezing point if it is standing undisturbed, and then a slight shock will bring it into the solid state…..

"In the moral sphere, in so far as it is considered under the categories of being, there occurs the same transition from quantity into quality and different qualities appear to be based in a difference of magnitude.

"It is through a more or less that the measure of frivolity or thoughtlessness is exceeded and something quite different comes about, namely crime, and thus right becomes wrong and virtue vice. Thus states, too, acquire through their quantitative difference, other things being assumed equal, a distinct qualitative character. With the expansion of the state and an increased number of citizens, the laws and the constitution acquire a different significance. The state has its own measure of magnitude and when this is exceeded this mere change of size renders it liable to instability and disruption under that same constitution which was its good fortune and its strength before its expansion." (Hegel 1812 [1969]).

The second law, that of the interpenetration of opposites, was formulated first in his 'Law of Diversity' ("All things are different, or, there are no two things like each other.") and then in 'The Law of Contradiction' working behind the 'being-nothing-becoming' relationship:

"If, now, the first determinations of reflection, namely, identity, difference and opposition, have been put in the form of a law, still more should the determination into which they pass as their truth, namely, contradiction, be grasped and enunciated as a law: *everything is inherently contradictory*, and in the sense that *this law* in contrast to the others expresses rather the *truth and the essential nature of things*. The contradiction which makes its appearance in opposition, is only the developed nothing that is contained in identity and that appears in the expression that the law of identity says *nothing*. This negation further determines itself into difference and opposition, which now is the posited contradiction.

"But it is one of the fundamental prejudices of logic as hitherto understood and of ordinary thinking that contradiction is not so characteristically essential and immanent a determination as identity; but in fact, if it were a question of grading the two determinations and they had to be kept separate, then contradiction would have to be taken as the profounder determination and more characteristic of essence. For as against contradiction, identity is merely the determination of the simple immediate, of dead being; but contradiction is the *root of all movement and vitality*; it is only in so far as something has a contradiction within it that it moves, has an urge and activity.

"Now as regards the assertion that *there is* no contradiction, that it does not exist, this statement need not cause us any concern; an absolute determination of essence must be present in every experience, in everything actual, as in every notion. We made the same remark above in connection with the *infinite*, which is the contradiction as displayed in the sphere of being. But common experience itself enunciates it when it says that at least *there is* a *host* of contradictory things, contradictory arrangements, whose contradiction exists not merely in an external reflection but in themselves. Further, it is not to be taken merely as an abnormality which occurs only here and there, but is rather the negative as determined in the sphere of essence, the principle of all self-movement, which consists solely in an exhibition of it. External, sensuous movement itself is contradiction's immediate existence. Something moves, not because at one moment it is here and at another there, but because at one and the same moment it is here and not here, because in this 'here', it at once is and is not. The ancient dialecticians must be granted the contradictions that they pointed out in

motion; but it does not follow that therefore there is no motion, but on the contrary, that motion is *existent* contradiction itself.

"Similarly, internal self-movement proper, *instinctive urge* in general, (the appetite or *nisus* of the monad, the entelechy of absolutely simple essence), is nothing else but the fact that something is, in one and the same respect, *self-contained and* deficient, *the negative of itself. Abstract* self-identity *has no vitality*, but the positive, being in its own self a negativity, goes outside itself and *undergoes alteration*. Something is therefore alive only in so far as it contains contradiction within it, and moreover is this power to hold and endure the contradiction within it. But if an existent in its positive determination is at the same time incapable of reaching beyond its negative determination and holding the one firmly in the other, is incapable of containing contradiction within it, then it is not the living unity itself, not ground, but in the contradiction falls to the ground. *Speculative thinking* consists solely in the fact that thought holds fast contradiction, and in it, its own self, but does not allow itself to be dominated by it as in ordinary thinking, where its determinations are resolved by contradiction only into other determinations or into nothing.

"If the contradiction in motion, instinctive urge, and the like, is masked for ordinary thinking, in the simplicity of these determinations, contradiction is, on the other hand, immediately represented in the *determinations of relationship*. The most trivial examples of above and below, right and left, father and son, and so on *ad infinitum*, all contain opposition in each term. That *is* above, which is *not* below; 'above' is specifically just this, not to be 'below', and only *is, in so far as* there is a 'below'; and conversely, each determination implies its opposite. Father is the other of son, and the son the other of father, and each only *is* as this other of the other; and at the same time, the one determination only is, in relation to the other; their being is a *single* subsistence. The father also has an existence of his own apart from the son-relationship; but then he is not father but simply man; just as above and below, right and left, are each also a reflection-into-self and are something apart from their relationship, but then only places in general. Opposites, therefore, contain contradiction in so far as they are, in the same respect, negatively related to one another or *sublate each other* and are *indifferent* to one another. Ordinary thinking when it passes over to the moment of the *indifference* of the determinations, forgets

> their negative unity and so retains them merely as 'differents' in general, in which determination, right is no longer right, nor left, left, etc. But since it has, in fact, right and left before it, these determinations are before it as self-negating, the one being in the other, and each in this unity being not self-negating but indifferently for itself." (Hegel 1812 [1969]).

Thus, according to Hegel, everything is inherently contradictory, and contradiction is the root of all movement and vitality; that is, it is only in so far as something has a contradiction within it that it moves, has an urge and activity. Something is, in one and the same respect, self-contained and deficient, the negative of itself. Opposites, therefore, contain contradiction in so far as they are, in the same respect, negatively related to one another or *sublate* each other and are indifferent to one another. Heinrich Moritz Chalybäus (1796–1862; a German philosopher, famous for his exegetical characterization of Hegel's dialectics in terms of *thesis-antithesis-synthesis triad*) in his exegetical work on philosophy interpreted this Hegelian dialectics as follows:

> "….. everywhere the idea or notion appears first of all in its immediateness, or intrinsic reality, that it then passes judgment upon itself or becomes resolved into its opposite, and ultimately coalesces from out these antagonisms. From this very method results the whole structure or subdivision of the system. The Absolute, the being-thinking or *Idee,* has to pass through three momenta, and in the first place to present itself as bare idea in and for itself; secondly, in its differentiation or objective state, externality; and thirdly, as the idea that has returned from its externality into itself: in the first state it is the purely logical *Idee*, the *thinking process* taken in the stricter sense as such in and for itself; in the second, it is the *Idee* in its externality, or departure from itself into a temporospatial disjunctivity, i. *e. nature*; and in the third, it is the *mind* or intelligence. Accordingly, the whole of philosophy, or the thinking process, which has comprehended itself in this its active state, has three cardinal divisions – the Logic, which with Hegel, as is readily seen, implies also *Metaphysics;* the Philosophy of Nature; and Philosophy of Mind." (Chalybäus 1837 [1854])

Chalybäus continued his exegesis and formulated the famous triad for Hegelian dialectics:

> "In [the] origination, being and naught are suppressed, *i. e.* simultaneously preserved and contained; for if we analyse what is implied by the act of becoming, it is seen to

be an alternating process of origination and evanescence, or of evanescence and origination, a continual transition from the being into the naught and a continual proceeding from the naught into being.

"Such is the first Trilogy; the unity of being, naught, and origination, or of position, negation, and limitation; but, ….., we have not by the latter term to think of any external limitation, but only of the internal self-differencing of this movement, or of the oscillation and vibration between being and non-being. In this first methodical thesis, antithesis, and synthesis, whereof the latter consists in a process or course of gradually closer self-determination, we have at once an example or type of all succeeding theses, and shall understand these the more readily, by referring to the above simple movement of thought." (Chalybäus 1837 [1854]).

Thus appeared the much abused triad of 'thesis-antithesis-synthesis', wrongly ascribed to Hegel for his 'being-nought-becoming' process – another instance of a filling-in of a philosophical blank.

And thus began the ceaseless exploits of the triad on the wings of the speculative power of the Communist teachers. To start with, Karl Marx, in his famous response [in *The Poverty of Philosophy* 1847] to Pierre-Joseph Proudhon (1809 – 1865, French politician, mutualist (anarchist) philosopher and socialist), explained that the movement of pure reason, according to Hegel, consists in

"….. posing itself, opposing itself, composing itself; in formulating itself as thesis, antithesis, synthesis; or, yet, in affirming itself, negating itself, and negating its negation……

"But once it has managed to pose itself as a thesis, this thesis, this thought, opposed to itself, splits up into two contradictory thoughts – the positive and the negative, the yes and no. The struggle between these two antagonistic elements comprised in the antithesis constitutes the dialectical movement. The yes becoming no, the no becoming yes, the yes becoming both yes and no, the no becoming both no and yes, the contraries balance, neutralize, paralyze each other. The fusion of these two contradictory thoughts constitutes a new thought, which is the synthesis of them. This thought splits up once again into two contradictory thoughts, which in turn fuse into a new synthesis. Of this travail is born a group of thoughts. This group of thoughts

follows the same dialectic movement as the simple category, and has a contradictory group as antithesis. Of these two groups of thoughts is born a new group of thoughts, which is the synthesis of them.

"Just as from the dialectic movement of the simple categories is born the group, so from the dialectic movement of the groups is born the series, and from the dialectic movement of the series is born the entire system." (Marx 1847 [1975]).

Feuerbach identified in his *Principles of the Philosophy of the Future* the culmination of modem philosophy in the Hegelian philosophy; according to him, the historical necessity and justification of the new philosophy (including pantheism, the philosophical outlook which identifies God with Nature, rather than seeing Nature as having been created or controlled by God) must be therefore derived mainly from a critique of Hegel's. He argued:

"The *contradiction* of the modern philosophy, especially of pantheism, consists of the fact that it is the *negation of theology from the standpoint of theology* or the negation of theology which itself is *again theology;* this contradiction *especially characterises the Hegelian philosophy.*

"For modern philosophy, and hence also for Hegel, the non-material being or being as a pure object of the intellect, as a pure being of the intellect, is the only true and Absolute Being, that is, God. Even matter, which Spinoza turns into an attribute of the divine substance, is a metaphysical thing, a pure being of the intellect, for the essential determination of matter as distinguished from the intellect and the activity of thinking – that it is a passive being – is taken away from it. But Hegel differs from earlier philosophy by the fact that he determines the relationship of the material sensuous being to the non-material being differently. The earlier philosophers and theologians held the true divine being to be detached and liberated from nature; that is, from sensuousness or matter. They situated the toil of abstraction and self-liberation from the sensuous *in themselves* in order to arrive at that which in *itself is free* from the sensuous. To this condition of *being free,* they ascribed the blissfulness of the divine, and to this self-liberation, the virtue of the human essence. Hegel, on the other hand, turned this subjective activity into the *self-activity* of the Divine Being. Even God must subject himself to this toil, and must, like pagan heroes, win his divinity through virtue. Only in this way does the freedom of the Absolute from

matter, which is, besides, only a precondition and a conception, become reality and truth. This self-liberation from matter, however, can be posited in God only if matter, too, is posited in him. But how can it be posited in him? Only in this way that he himself posits it. But in God there is only God. Hence, the only way to do this is that he posits *himself* as matter, as non-God; that is, as his otherness. In this way, matter is not an antithesis of the ego and the spirit, preceding them, as it were, in an incomprehensible way; it is the *self-alienation* of the Spirit. Thus, matter itself acquires spirit and intellect; it is taken over into the absolute essence as a moment in its life, formation, and development. But then, matter is again posited as an *untrue* being resembling nothingness in so far as only the being that restores itself out of this alienation, that is, that sheds matter and sensuousness off from itself, is pronounced to be the perfect being in its true form. The natural, material, and sensuous – and indeed, the sensuous, not in the vulgar and moral, but in the metaphysical sense – are therefore even here *something to be negated,* like nature which in theology has been poisoned by the original sin. Indeed, the sensuous is incorporated into reason, the ego, and the spirit, but it is something irrational, a note of discord within reason; it is *the non-ego* in the *ego,* that is, that which *negates* it. For example in Schelling nature in God is the non-divine in God; it is in God and yet outside him; the same is true of the body in the philosophy of Descartes which, although connected with me, that is, with the spirit, is nevertheless external, and does not belong to me, that is, to my essence; it is of no consequence, therefore, whether it is or is not connected with me. Matter will remain *in contradiction* to what is presupposed by philosophy as the true being.

“Matter is indeed posited in God, that is, posited as God, and to posit matter as God is as much as saying, "There is no God," or as much as abolishing theology and recognising the truth of materialism. But the fact remains that the truth of theology is at the same time taken for granted. Atheism, the negation of theology, is therefore negated again; this means that theology is restored through philosophy. God is *God* only through the fact that he overcomes and negates matter; that is, the negation of God. And according to Hegel, it is only the negation of the negation that constitutes the true positing. And so in the end, we are back to whence we had started – in the lap of Christian theology. Thus, already in the most central principle of Hegel's philosophy we come across the principle and conclusion of his philosophy of religion to the effect that philosophy, far from abolishing the dogmas of theology, only

> restores and mediates them through the negation of rationalism. The secret of Hegel's dialectic lies ultimately in this alone, that it *negates theology through philosophy in order then to negate philosophy through theology*. Both the beginning and the end are constituted by theology; philosophy stands in the middle as the negation of the first positedness, but the negation of the negation is again theology. At first everything is overthrown, but then everything is reinstated in its old place, as in Descartes. The Hegelian philosophy is the last grand attempt to restore a lost and defunct Christianity through philosophy, and, of course, as is characteristic of the modern era, by *identifying the negation* of Christianity with *Christianity itself.* The much-extolled speculative identity of spirit and matter, of the infinite and the finite, of the divine and the human is nothing more than the wretched contradiction of the modern era having reached its zenith in metaphysics. It is the identity of belief and unbelief, theology and philosophy, religion and atheism, Christianity and paganism. This contradiction escapes the eye and is obfuscated in Hegel only through the fact that the negation of God, or atheism, is turned by him into an objective determination of God; God is determined as a *process,* and atheism as a moment within this process. But a belief that has been reconstructed out of unbelief is as little true belief – because it is always afflicted with its antithesis – as the God who has been reconstructed out of hi negation is a true God; he is rather a self-contradictory, an atheistic God." (Feuerbach 1843).

Against Hegel's dialectic of Absolute Knowledge, Feuerbach claimed to reintroduce dialectics back into the dialogical situation; he maintained in his *Principles of the Philosophy of the Future*:

> "The *true* dialectic is not a *monologue of the solitary thinker with himself.* It is a *dialogue between* "*I*" *and* "*You*"." (Feuerbach 1843).

He elaborated this idea in his 1839 article *Towards a Critique of Hegel's Philosophy*:

> "A twosome is needed to prove something. While proving, the thinker splits himself into two; he contradicts himself, and only after a thought has been and has overcome its own opposition, can it be regarded as proved. To prove is at the same time to refute. Every intellectual determination has its antithesis, its contradiction. Truth exists not in unity with, but in refutation of its opposite. Dialectics is not a monologue that speculation carries on with itself, but a dialogue between speculation and empirical reality. A thinker is a dialectician only in so far as he is his own opponent.

The zenith of art and of one's own power is to doubt oneself. Hence, if philosophy or, in our context, the Logic wishes to prove itself true, it must refute rational empiricism or the intellect which denies it and which alone contradicts it. Otherwise all its proofs will be nothing more than subjective assurances, so far as the intellect is concerned. The antithesis of being – in general and as regarded by the Logic – is not nothingness, but sensuous and concrete being…….

"The only philosophy that proceeds from no presuppositions at all is one that possesses the courage and freedom to doubt itself, that produces itself out of its antithesis. All modern philosophies, however, begin only with themselves and not with what is in opposition to them. They presuppose philosophy; that is, what they understand by philosophy to be the immediate truth. They understand by mediation only elucidation, as in the case of Fichte, or development, as in the case of Hegel. Kant was critical towards the old metaphysics, but not towards himself. Fichte proceeded from the assumption that the Kantian philosophy was the truth. All he wanted was to raise it to "science," to link together that which in Kant had a dichotomized existence, by deriving it from a common principle. Similarly, Schelling proceeded from the assumption that the Fichtean philosophy was the established truth, and restored Spinoza in opposition to Fichte. As far as Hegel is concerned, he is a Fichte as mediated through a Schelling. Hegel polemicized against the Absolute of Schelling; he thought it lacked the moment of reflection, apprehension, and negativity. In other words, he imbued the Absolute Identity with Spirit, introduced determinations into it, and fructified its womb with the semen of the Notion (the ego of Fichte). But he, nevertheless, took the truth of the Absolute for granted. He had no quarrel with the existence or the objective reality of Absolute Identity; he actually took for granted that Schelling's philosophy was, in its essence, a true philosophy. All he accused it of was that it lacked form. Hence, Hegel's relationship to Schelling is the same as that of Fichte to Kant. To both the true philosophy was already in existence, both in content and substance; both were motivated by a purely "scientific," that is, in this case, systematic and formal interest. Both were critics of certain specific qualities of the existing philosophy, but not at all of its essence. That the Absolute existed was beyond all doubt. All it needed was to prove itself and be known as such. In this way it becomes a result and an object of the mediating Notion; that is, a "scientific" truth and not merely an assurance given by intellectual intuition.

“But precisely for that reason the proof of the Absolute in Hegel has, in principle and essence, only a formal significance, notwithstanding the scientific rigor with which it is carried out. Right at its starting point, the philosophy of Hegel presents us with a contradiction, the contradiction between truth and science, between essence and form, between thinking and writing. The Absolute Idea is assumed, not formally, to be sure, but essentially. What Hegel premises as stages and constituent parts of mediation, he thinks are determined by the Absolute Idea. Hegel does not step outside the Idea, nor does he forget it. Rather, he already thinks the antithesis out of which the Idea should produce itself on the basis of its having been taken for granted. It is already proved substantially before it is proved formally. Hence, it must always remain unprovable, always subjective for someone who recognizes in the antithesis of the Idea a premise which the Idea has itself established in advance. The externalization of the Idea is, so to speak, only a dissembling; it is only a pretense and nothing serious – the Idea is just playing a game. The conclusive proof is the beginning of the Logic, whose beginning is to be taken as the beginning of philosophy as such. That the starting point is being is only a formalism, for being is here not the true starting point, nor the truly Primary. The starting point could just as well be the Absolute Idea because it was already a certainty, an immediate truth for Hegel before he wrote the Logic; i.e., before he gave a scientific form of expression to his logical ideas. The Absolute Idea – the Idea of the Absolute – is its own indubitable certainty as the Absolute Truth. It posits itself in advance as true; that which the Idea posits as the other, again presupposes the Idea according to its essence. In this way, the proof remains only a formal one. To Hegel, the thinker, the Absolute Idea was absolute certainty, but to Hegel, the author, it was a formal uncertainty. This contradiction between the thinker who is without needs, who can anticipate that which is yet to be presented because everything is already settled for him, and the needy writer who has to go through a chain of succession and who posits and objectifies as formally uncertain what is certain to the thinker – this contradiction is the process of the Absolute Idea which presupposes being and essence, but in such a way that these on their part already presuppose the Idea. This is the only adequate reason required to explain the contradiction between the actual starting point of the Logic and its real starting point which lies at the end. As was already pointed out, Hegel in his heart of hearts was convinced of the certainty of the Absolute Idea. In this regard, there was nothing of the critic or the skeptic in him. However, the Absolute Idea had to demonstrate its truth, had to be released from the

confines of a subjective intellectual conception – it had to be shown that it also existed for others. Thus understood, the question of its proof had an essential, and at the same time an inessential, meaning: It was a necessity in so far as the Absolute Idea had to prove itself, because only so could it demonstrate its necessity; but it was at the same time superfluous as far as the inner certainty of the truth of the Absolute Idea was concerned. The expression of this superfluous necessity, of this dispensable indispensability or indispensable dispensability is the Hegelian method. That is why its end is its beginning and its beginning its end. That is why being in it is already the certainty of the Idea, and nothing other than the Idea in its immediacy. That is why the Idea's lack of self-knowledge in the beginning is, in the sense of the Idea, only an ironical lack of knowledge. What the Idea says is different from what it thinks. It says "being" or "essence," 'but actually it thinks only for itself. Only at the end does it also say what it thinks, but it also retracts at the end what it had expressed at the beginning, saying: "What you had, at the beginning and successively, taken to be a different entity, that I am myself." The Idea itself is being and essence, but it does not yet confess to be so; it keeps this secret to itself.……

"Hegel restored philosophy by rescuing it from the realm of imagination. A Hegelian applies with perfect justification to Hegel what Aristotle remarked of Anaxagoras; namely, that he (Anaxagoras), as one among drunks, was the only sober thinker among the philosophers of nature. With Hegel the unity of thought and being acquired a rational meaning, which is not, however, above criticism. Hegel's principle is the thinking spirit. He incorporated into philosophy the element in which rationalism has its being; namely, the intellect. In spite of the assurance to the contrary, the intellect, both as a matter of fact and with respect to its own reality, was excluded from the idea of the Absolute; in Hegel, it became a moment of the Absolute itself. The metaphysical expression of this state of affairs is the statement that the negative, the other or that which is an object of reflection, is to be conceived not only as negative and finite, but also as positive and essential. There is therefore a negative and critical element in Hegel even if what really determines his thinking is the idea of the Absolute. Although he recognized that the Absolute lacked intellect or the principle of form – both are to him one and the same – and although he actually defined the Absolute differently from Schelling by attributing to it the principle of form, thus raising form to the level of essence, the fact remains that for Hegel form – and this is

indeed necessarily included in its notion – simultaneously means something formal, and the intellect again means something negative. It was assumed that the content of the philosophy of the Absolute was true, speculative, and profound; all it lacked was the form of the notion. The notion – form or intellect – was posited as essential to the extent that its absence meant a defect. However, this defect must be only a formal affair if the content has been assumed as true – herein can be seen the proof of what we said earlier about the method of Hegel. This means that philosophy is not concerned with anything except notion or form. The content – even if it is to be produced internally by philosophy's self-activity inasmuch as it is contained in the form of the notion – is always given: The business of philosophy is solely to apprehend it by critically distinguishing the essential from the non-essential or from that which is contributed by the peculiar form of intuition or sensuousness. Philosophy in Hegel has therefore no genetico-critical sense, although it certainly has a critical one. A genetico-critical philosophy is one that does not dogmatically demonstrate or apprehend an object given through perception – for what Hegel says applies unconditionally to objects given immediately, i.e., those that are absolutely real and given through nature – but examines its origin; which questions whether an object is a real object, only an idea, or just a psychological phenomenon; which, finally, distinguishes with utmost rigor between what is subjective and what is objective. The genetico-critical philosophy is mainly concerned with those things that are otherwise called secondary causes. Indeed, its relationship to absolute philosophy – which turns subjective psychological processes and speculative needs, for example, Jakob Böhme's process through which God is mediated, into the processes of the Absolute – is, to illustrate by analogy, the same as the relationship of that theological view of nature which takes comets or other strange phenomena to be the immediate workings of God to the purely physicist or natural philosophical view which sees, for example, the cause of the gallnut in the innocent sting of an insect rather than looking upon it, as theology does, as a sign of the existence of the Devil as a personal being. The Hegelian philosophy is, uniquely, a rational mysticism. Hence it fascinates in the same measure as it repels. The mystical-speculative souls, for whom it is an unbearable contradiction to see the mystical united with the rational, find it repulsive because they find the notion disappointing, and destructive of the very mystical fascination they cherish. It is equally repulsive to rational heads who find the union of the rational and the mystical abhorrent. The unity of the subjective and the objective

as enunciated and placed at the summit of philosophy by Schelling, a unity that is still basic to Hegel although placed by him – but only according to form – in the right place; namely, at the end of philosophy as the Result. This unity is both a fruitless and a harmful principle because it eliminates the distinction between "subjective" and "objective" even in the case of particulars, and renders futile the genetico-critical thought, indeed, negates the very question about truth. The reason why Hegel conceived those ideas which express only subjective needs to be objective truth is because he did not go back to the source of and the need for these ideas. What he took for real reveals itself on closer examination to be of a highly dubious nature. He made what is secondary primary, thus either ignoring that which is really primary or dismissing it as something subordinate. And he demonstrated what is only particular, what is only relatively rational, to be the rational in and for itself. Thus, as a consequence of the lack of a genetico-critical mode of enquiry, we see nothingness – a conception that is extremely proximate to the idea of the Absolute – play its role right at the beginning of the Logic. But what is this nothingness? "By the shadow of Aristotle!" Nothingness is that which is absolutely devoid of thought and reason. Nothingness cannot be thought at all, because to think is to determine, as Hegel himself says. If nothingness were conceived, it would come to be determined, and hence it would no longer be nothingness. As has been rightly said, of the non-essent there is no knowledge. We call nothingness that to which no concept corresponds (Wolf). Thought can think only that which is because thought is itself an essent, a real activity. The pagan philosophers have been criticized for not being able to overcome the eternity of matter and the world. However, to them, matter meant being; it was the sensuous expression of being. What they have been criticized for is that they made use of thought. But have the Christians really done away with the eternity; that is, the reality of being? All they have done is to place it into a particular being, into the being of God which they thought of as its own ground and as being without beginning. Thought can never go beyond being, because it cannot go beyond itself; because reason consists only in positing being; because only this or that being, but not the genesis of being itself, can be thought. The activity of thinking authenticates itself as a well-grounded and real activity precisely through the fact that its first and last notion is that of being without beginning. The Augustinian nothingness, which appears to be so impressive and profound to speculative thinkers precisely because there is nothing behind it, is simply an expression of absolute arbitrariness and thoughtlessness. This

amounts to saying that I cannot conceive of any other ground of the world except absolute arbitrariness; that is, I cannot conceive of any other ground except no ground at all, except as just an empty act of will. But in a mere act of will reason disappears and I do not advance something which could be an object for thought, which could be called a ground; what I say is as much as nothing. Hence all I express is my own ignorance, my own arbitrariness. Nothingness is an absolute self-deception, proton pseudos, the absolute lie in itself. The thought of nothingness is thought contradicting itself. He who thinks nothingness thinks precisely nothing. Nothingness is the negation of thought; it can therefore only be thought at all in so far as it is made into something. In the moment nothingness is thought of, it is also not thought of, for I also think the opposite of nothingness. "Nothingness is simple sameness with itself." Oh really? But are simplicity and sameness then not real determinations? Do I really think nothingness when I think simple sameness? Do I therefore not deny nothingness the moment I posit it? "Nothingness is complete vacuity, complete absence of determination and content, complete undifferentiatedness in itself." What? Is nothingness undifferentiated in itself? Do I then not posit something in nothingness in exactly the same way in which nothingness in *creatio ex nihilo* is posited as quasi-matter in so far as the world is supposed to be created out of nothingness? Can I then speak of nothingness without contradicting myself? Nothingness is complete vacuity. But what is vacuity? Vacuity is where there is nothing, but at the same time where there should be or can be something. In other words, vacuity is the expression for capacity. Now this would make nothingness into an entity, and an entity whose capacity to contain is the greatest. But you say that it is absolutely without determination and content. However, I cannot think of something that lacks all determination and content, for it is impossible to have a notion of something that lacks all determination. By using the word "lack," I give expression to the fact that something is missing, that a default is involved. This means that I think of content and determination as primary because they are positive, or, in other words, I think nothingness through something which is not nothingness. I set nothingness in relation to that which is full of content. But this also means that where I set things in relation to one another I at the same time posit determinations. Thought is a determinate, i.e., an affirmative activity to such a degree that that which is absolutely indeterminate becomes something determinate the moment it is thought; that through the very act of thought the idea of nothingness reveals itself directly as thoughtlessness, as an untrue

> thought, as something that just simply cannot be thought. If it were really possible to think nothingness, the distinction between reason and unreason, thought and thoughtlessness would disappear. In that case It would be possible to think and justify any and everything, even the greatest impossibility and nonsense. This also explains why the most senseless fantasies and the most preposterous miracle-mongering could flourish as long as the idea of a *creatio ex nihilo* was held to be true, for they naturally followed from the idea of nothingness which, as a sanctified authority, stood at the head of creation. Nothingness is the limit of reason. A follower of Kant would of course interpret this limit – as all other limits – in the sense of the limitation of reason. Nothingness, however, is a rational limit, a limit which reason itself imposes upon itself and which is an expression of its essence and reality because nothingness is simply the absence of all reason. If it were possible for reason to think nothingness, it would in that case have taken leave of itself." (Feuerbach 1839 [1972]).

And Engels proclaimed in Chapter 6 of *The Holy Family*:

> "….. who, then, revealed the mystery of the "system"? *Feuerbach*. Who annihilated the dialectics of concepts, the war of the gods that was known to the philosophers alone? *Feuerbach*. Who substituted for the old lumber and for "infinite self-consciousness" if not, indeed, "*the significance of man*" – as though man had another significance than that of being man! – at any rate "*Man*"? *Feuerbach*, and only *Feuerbach*. And he did more. Long ago he did away with the very categories with which "*Criticism*" now operates – the "real wealth of human relations, the immense content of history, the struggle of history, the fight of the Mass against the Spirit", etc., etc." (Marx and Engels 1845 [1975]).

However, Feuerbach loved to remain in the realm of abstraction only, far away from that of living reality. From the abstract man of Feuerbach, one meets real living men only when one considers them as participants in history; and precisely that was what Feuerbach resisted.

> "But the step which Feuerbach did not take nevertheless had to be taken. The cult of abstract man, which formed the kernel of Feuerbach's new religion, had to be replaced by the science of real men and of their historical development. This further development of Feuerbach's standpoint beyond Feuerbach was inaugurated by Marx in 1845 in *The Holy Family*." (Engels 1886 [1970]).

Marx and Engels inherited the Hegelian-Feuerbach legacy from a radical critique and rearticulation. As Engels observed in *Ludwig Feuerbach and the End of Classical German Philosophy* (quoted in the last chapter), the materialism of the preceding century had predominantly been mechanical, because at that time, of all natural sciences, only mechanics of solid bodies had come to any definite close. The exclusive application of the standards of mechanics to processes of a chemical and organic nature had constituted the first specific but inevitable limitations of the classical French materialism. Its second limitation had been its inability to comprehend the universe as a process, as matter undergoing uninterrupted historical development. This had no doubt corresponded with the level of the natural science of that time, and with the metaphysical, that is, anti-dialectical manner of philosophizing connected with it and hence been quite inevitable. The 'vulgar materialists' of Germany in the 1850s too followed suit. They did not care to make use of the advances of natural science made in the meantime to develop the theory any further.

> "Feuerbach alone was of significance as a philosopher. But not only did philosophy – claimed to soar above all special sciences and to be the science of sciences connecting them – remain to him an impassable barrier, an inviolable holy thing, but as a philosopher, too, he stopped half-incapable of disposing of Hegel through criticism; he simply threw him aside as useless, while he himself, compared with the encyclopaedic wealth of the Hegelian system, achieved nothing positive beyond a turgid religion of love and a meagre, impotent morality." (Engels 1886 [1970]).

This was the background for Marx and Engels. They set out, "free from preconceived idealist crotchets", with a materialistic world outlook, "taken really seriously for the first time" and carried through consistently "in all domains of knowledge concerned". They did not abandon Hegel.

> "On the contrary, a start was made from his revolutionary side …. from the dialectical method. But in its Hegelian form, this method was unusable. According to Hegel, dialectics is the self-development of the concept. The absolute concept does not only exist – unknown where – from eternity, it is also the actual living soul of the whole existing world. It develops into itself through all the preliminary stages which are treated at length in the *Logic* and which are all included in it. Then it "alienates" itself by changing into nature, where, unconscious of itself, disguised as a natural necessity, it goes through a new development and finally returns as man's consciousness of

himself. This self-consciousness then elaborates itself again in history in the crude form until finally the absolute concept again comes to itself completely in the Hegelian philosophy. According to Hegel, therefore, the dialectical development apparent in nature and history – that is, the causal interconnection of the progressive movement from the lower to the higher, which asserts itself through all zigzag movements and temporary retrogression – is only a copy [*Abklatsch*] of the self-movement of the concept going on from eternity, no one knows where, but at all events independently of any thinking human brain. This ideological perversion had to be done away with. We comprehended the concepts in our heads once more materialistically – as images [*Abbilder*] of real things instead of regarding real things as images of this or that stage of the absolute concept. Thus dialectics reduced itself to the science of the general laws of motion, both of the external world and of human thought – two sets of laws which are identical in substance, but differ in their expression in so far as the human mind can apply them consciously, while in nature and also up to now for the most part in human history, these laws assert themselves unconsciously, in the form of external necessity, in the midst of an endless series of seeming accidents. Thereby the dialectic of concepts itself became merely the conscious reflex of the dialectical motion of the real world and thus the dialectic of Hegel was turned over; or rather, turned off its head, on which it was standing, and placed upon its feet. And this materialist dialectic, which for years has been our best working tool and our sharpest weapon, was, remarkably enough, discovered not only by us but also, independently of us and even of Hegel, by a German worker, Joseph Dietzgen." (Engels 1886 [1970]).

Joseph Dietzgen (1828 – 1888; German socialist philosopher and Marxist) was, according to himself, "not an academician, but a simple tanner who learned Philosophy by himself". He developed the notion of dialectical materialism independently in *The Nature of Human Brainwork* (1869). He wrote in his 1876 work, *Social-Democratic Philosophy*:

> "The hope of Social-Democracy is based on the organic necessity of progress. We do not depend on the good will of any man. Our principle is organic, our philosophy materialistic, but our materialism is richer in essence and more positive than any of its predecessors. It absorbed the Idea, the antagonism of matter, it mastered the domain of Reason, and overcame the antagonism between the mechanical and spiritual view

> of life. The spirit of negation is with us at the same time positive, our element is dialectical. "Once my work on Economics finished," wrote Marx to me privately, "I shall write a Dialectics. The laws of Dialectics have been formulated by Hegel, though in mystical form. What we have to do has to strip it of that form." Being afraid it might be long before Marx could undertake such a work, and having since my youth independently thought a good deal on that subject, I shall try to throw some light on dialectical philosophy. It is in my opinion the central sun from whom light goes forth to illuminate not only Political Economy, but the whole course of human development, and it will finally, I expect, penetrate to the "final cause" of all science." (Dietzgen (1876 [1906]).
>
> "As far back as 1844 Frederick Engels spoke in the preface to his *Condition of the Working Class in England* of the end Feuerbach put to all philosophy. But Feuerbach was so intensely occupied with the theological devotee that he had very little time and mental energy left to join issue with the other sister, the philosophical one. His final solution of philosophy is more implicit than explicit. Yet this disciple of Hegel proves indirectly the truth of Marx's word: "The true laws of Dialectics are to be found in Hegel, though only in a mystical form." Feuerbach and Marx, both Hegelians, arrived at the same result by the same method which Feuerbach made use of in his analysis of religion, and Marx in his analysis of social economy." (Dietzgen 1876 [1906]).

Though his writings had a profound influence on Lenin, it is unfortunate that he has not received his due share of recognition in the Marxist circle. Lenin himself seems to have had very little esteem for him, as he wrote in his *Materialism and Empirio-criticism*:

> "Joseph Dietzgen is a dialectical materialist. We shall show below that his mode of expression is often inexact, that he is often not free from confusion, a fact which has been seized upon by various foolish people…" (Lenin 1908 [1947]).

Despite a large number of quotes from Dietzgen in defence of dialectical materialism that Lenin used freely in this work, he also spoke of "a specific philosophy of Dietzgen differing from dialectical materialism", "by seizing upon … incorrect passages" from him. (Lenin 1908 [1947]).

Anyhow, according to Engels, the revolutionary side of the Hegelian philosophy was thus again taken up, after Feuerbach, this time freed from the Hegelian idealist trimmings which

had prevented its consistent execution. The great basic thought that the world is a complex of *processes*, in which, in spite of all seeming accidentally and of all temporary retrogression, a progressive development asserts itself in the end,

> "has, especially since the time of Hegel, so thoroughly permeated ordinary consciousness that in this generality it is now scarcely ever contradicted." (Engels 1886 [1970]).

This glorious success of the new philosophy, dialectical materialism, was made possible by the developments in natural science. The old metaphysics, which had accepted things as finished objects, had arisen from a natural science looking into the dead and living things as finished objects.

> "…. in fact, while natural science up to the end of the last century was predominantly a *collecting* science, a science of finished things, in our century it is essentially a systematizing science, a science of the processes, of the origin and development of these things and of the interconnection which binds all these natural processes into one great whole. Physiology, which investigates the processes occurring in plant and animal organisms; embryology, which deals with the development of individual organisms from germs to maturity; geology, which investigates the gradual formation of the Earth's surface – all these are the offspring of our century.
>
> "But, above all, there are three great discoveries which have enabled our knowledge of the interconnection of natural processes to advance by leaps and bounds:
>
> "First, the discovery of the cell as the unit from whose multiplication and differentiation the whole plant and animal body develops. Not only is the development and growth of all higher organisms recognized to proceed according to a single general law, but the capacity of the cell to change indicates the way by which organisms can change their species and thus go through a more than individual development.
>
> "Second, the transformation of energy, which has demonstrated to us that all the so-called forces operative in the first instance in inorganic nature – mechanical force and its complement, so-called potential energy, heat, radiation (light, or radiant heat), electricity, magnetism, and chemical energy – are different forms of manifestation of universal motion, which pass into one another in definite proportions so that in place

> of a certain quantity of the one which disappears, a certain quantity of another makes its appearance and thus the whole motion of nature is reduced to this incessant process of transformation from one form into another.
>
> "Finally, the proof which Darwin first developed in connected form that the stock of organic products of nature environing us today, including man, is the result of a long process of evolution from a few originally unicellular germs, and that these again have arisen from protoplasm or albumen, which came into existence by chemical means.
>
> "Thanks to these three great discoveries, and the other immense advances in natural science, we have now arrived at the point where we can demonstrate the interconnection between the processes in nature not only in particular spheres but also the interconnection of these particular spheres on the whole, and so can present in an approximately systematic form a comprehensive view of the interconnection in nature by means of the facts provided by an empirical science itself." (Engels 1886 [1970]).

And that is what Marx did in social sciences. He opposed the static mode of thought in metaphysics which assumed fixed (dualistic) divisions, and which attributed to things a fixed being, instead of comprehending them in movement and transition, in conflicts and contradictions and interconnections and interactions. In a letter to Ludwig Kugelmann, he wrote on 6 March 1868:

> "He [Mr Dühring] knows full well that my method of exposition is *not* Hegelian, since I am a materialist, and Hegel an idealist. Hegel's dialectic is the basic form of all dialectic, but only *after* being stripped of its mystical form, and it is precisely this which distinguishes *my* method." (Marx 1868[1987]).

Again he wrote in his 'Afterword' to the second edition of Capital (Volume 1):

> "My dialectic method is not only different from the Hegelian, but is its direct opposite. To Hegel, the life-process of the human brain, i.e., the process of thinking, which, under the name of "the Idea", he even transforms into an independent subject, is the demiurgos of the real world, and the real world is only the external, phenomenal form of "the Idea". With me, on the contrary, the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought.

> "The mystifying side of Hegelian dialectic I criticised nearly thirty years ago, at a time when it was still the fashion. But just as I was working at the first volume of "Das Kapital", it was the good pleasure of the peevish, arrogant, mediocre Epigonoi, who now talk large in cultured Germany, to treat Hegel in the same way as the brave Moses Mendelssohn in Lessing's time treated Spinoza, i.e., as a "dead dog." I therefore openly avowed myself the pupil of that mighty thinker, and even here and there, in the chapter on the theory of value, coquetted with the modes of expression peculiar to him. The mystification which dialectic suffers in Hegel's hands, by no means prevents him from being the first to present its general form of working in a comprehensive and conscious manner. With him it is standing on its head. It must be turned right side up again, if you would discover the rational kernel within the mystical shell." (Marx 1873 [1954]).

Marx found a contradiction in the social reception of the Hegelian dialectics, as it became a 'fashion in Germany' and at the same time 'a scandal and an abomination', because of its subversive implications in its affirmative recognition of the negation of the existing state of things:

> "In its mystified form, dialectic became the fashion in Germany, because it seemed to transfigure and to glorify the existing state of things. In its rational form it is a scandal and abomination to bourgeoisdom and its doctrinaire professors, because it includes in its comprehension and affirmative recognition of the existing state of things, at the same time also, the recognition of the negation of that state, of its inevitable breaking up; because it regards every historically developed social form as in fluid movement, and therefore takes into account its transient nature not less than its momentary existence; because it lets nothing imposed upon it, and is in its essence critical and revolutionary." (*ibid.*)

Significantly, history was to witness later on the same dialectics becoming 'a scandal and an abomination' to the existing state of socialism!

Since his scientific dialectics was different from the Hegelian, Marx wanted to make it clear to the common man through an account in his own words, just as he explained though briefly the absolute method of the Hegelian dialectics in simple terms in *The Poverty of Philosophy* of 1847 (quoted above). In a letter to Engels (London) on 16 January 1858, he wrote:

> "What was of great use to me as regards method of treatment was Hegel's Logic at which I had taken another look by mere accident, Freiligrath having found and made me a present of several volumes of Hegel, originally the property of Bakunin. If ever the time comes when such work is again possible, I should very much like to write 2 or 3 sheets making accessible to the common reader the rational aspect of the method which Hegel not only discovered but also mystified." Marx (1858 [1983]).

But that time never came. After ten years he wrote the same to Joseph Dietzgen on 9 May 1868 (which we have seen earlier in Dietzgen's statement in his 1876 work):

> "When I have cast off the burden of political economy, I shall write a "Dialectic". The true laws of dialectics are already contained in Hegel, though in a mystified form." Marx (1868 [1988]).

But the time never let him cast off that burden, and thus, as Karl Korsch in his *Introduction to* "*Capital*" remarked, there remained "an enormous gap between what Marx planned and what he actually carried out in his work." (Korsch 1932). A number of texts criticising Hegel are there scattered in his works, especially in the earlier ones (for example, *Contribution to the Critique of Hegel's 'Philosophy of Right'* of 1843-44, the *1844 Manuscripts*, *The Holy Family* of 1844-45, the *Introduction* of 1859 *Grundrisse, Theses on Feuerbach, The German Ideology*, the *Afterword*), but mostly in terms of some metaphors (such as "standing on head", "turning right side up", "discovering the rational kernel within the mystical shell"), which are ambiguous and misleading in the absence of a 'background paper', a proper exposition of his philosophical method. Korsch (1932) points out a few

> "really grave difficulties raised by certain parts of Marx's work …. – difficulties experienced not only by the untutored, but also by those who are at home in the subject, but are not philosophically trained. It is these difficulties that are chiefly responsible for the oft-reiterated complaint about the 'obscurity of *Capital*'. The passages in question are, above all, the third section of the first chapter on the 'Form of Value', …. and one or two passages closely connected with it in Chapter 3, dealing with 'Money'. Then there are a few other, rather less difficult parts, among them Chapters 9, 11 and 12, …. considered now in their proper relation to Chapters 16 to 18 on 'Absolute and Relative Surplus Value', which are often regarded superficially as a simple recapitulation of Chapters 9, 11, and 12. All these difficulties are integrally bound up with what is called the 'dialectical method'."

But the difficulties did come to the notice of Marx himself! He happily remarked in the 'Afterword' to the second edition of Capital (Volume 1):

> "That the method employed in "Das Kapital" has been *little understood* is shown by the various conceptions, contradictory one to another, that have been formed of it." (Marx 1873 [1954]. Emphasis added.)

And he contentedly showcased a couple of examples:

> "Thus the *Paris Revue Positiviste* reproaches me in that, on the one hand, I treat economics metaphysically, and on the other hand – imagine! – confine myself to the mere critical analysis of actual facts, instead of writing receipts (Comtist ones?) for the cook-shops of the future. In answer to the reproach *in re* metaphysics, Professor Sieber has it:
>
> > "In so far as it deals with actual theory, the method of Marx is the deductive method of the whole English school, a school whose failings and virtues are common to the best theoretic economists."
>
> "M. Block – "Les Théoriciens du Socialisme en Allemagne. Extrait du Journal des Economistes, Juillet et Août 1872" – makes the discovery that my method is analytic and says: "Par cet ouvrage M. Marx se classe parmi les esprits analytiques les plus eminents." German reviews, of course, shriek out at "Hegelian sophistics." The *European Messenger* of St. Petersburg in an article dealing exclusively with the method of "Das Kapital" (May number, 1872, pp. 427-436), finds my method of inquiry severely realistic, but my method of presentation, unfortunately, German-dialectical. It says:
>
> > "At first sight, if the judgment is based on the external form of the presentation of the subject, Marx is the most ideal of ideal philosophers, always in the German, i.e., the bad sense of the word. But in point of fact he is infinitely more realistic than all his forerunners in the work of economic criticism. He can in no sense be called an idealist." (Marx 1873 [1954])

And he continued in the most self-gratifying tone to provide an answer, but with another show off:

“I cannot answer the writer better than by aid of a few extracts from his own criticism, which may interest some of my readers to whom the Russian original is inaccessible.

“After a quotation from the preface to my “Criticism of Political Economy,” Berlin, 1859, pp. IV-VII, where I discuss the materialistic basis of my method, the writer goes on:

> “The one thing which is of moment to Marx, is to find the law of the phenomena with whose investigation he is concerned; and not only is that law of moment to him, which governs these phenomena, in so far as they have a definite form and mutual connexion within a given historical period. Of still greater moment to him is the law of their variation, of their development, i.e., of their transition from one form into another, from one series of connexions into a different one. This law once discovered, he investigates in detail the effects in which it manifests itself in social life. Consequently, Marx only troubles himself about one thing: to show, by rigid scientific investigation, the necessity of successive determinate orders of social conditions, and to establish, as impartially as possible, the facts that serve him for fundamental starting-points. For this it is quite enough, if he proves, at the same time, both the necessity of the present order of things, and the necessity of another order into which the first must inevitably pass over; and this all the same, whether men believe or do not believe it, whether they are conscious or unconscious of it. Marx treats the social movement as a process of natural history, governed by laws not only independent of human will, consciousness and intelligence, but rather, on the contrary, determining that will, consciousness and intelligence. ... If in the history of civilisation the conscious element plays a part so subordinate, then it is self-evident that a critical inquiry whose subject-matter is civilisation, can, less than anything else, have for its basis any form of, or any result of, consciousness. That is to say, that not the idea, but the material phenomenon alone can serve as its starting-point. Such an inquiry will confine itself to the confrontation and the comparison of a fact, not with ideas, but with another fact. For this inquiry, the one thing of moment is, that both facts be investigated as accurately as possible, and that they actually form, each with respect to the other, different momenta of an evolution; but most important of all is the rigid analysis of the series of successions, of the

> sequences and concatenations in which the different stages of such an evolution present themselves. But it will be said, the general laws of economic life are one and the same, no matter whether they are applied to the present or the past. This Marx directly denies. According to him, such abstract laws do not exist. On the contrary, in his opinion every historical period has laws of its own. ... As soon as society has outlived a given period of development, and is passing over from one given stage to another, it begins to be subject also to other laws. In a word, economic life offers us a phenomenon analogous to the history of evolution in other branches of biology. The old economists misunderstood the nature of economic laws when they likened them to the laws of physics and chemistry. A more thorough analysis of phenomena shows that social organisms differ among themselves as fundamentally as plants or animals. Nay, one and the same phenomenon falls under quite different laws in consequence of the different structure of those organisms as a whole, of the variations of their individual organs, of the different conditions in which those organs function, &c. Marx, e.g., denies that the law of population is the same at all times and in all places. He asserts, on the contrary, that every stage of development has its own law of population. ... With the varying degree of development of productive power, social conditions and the laws governing them vary too. Whilst Marx sets himself the task of following and explaining from this point of view the economic system established by the sway of capital, he is only formulating, in a strictly scientific manner, the aim that every accurate investigation into economic life must have. The scientific value of such an inquiry lies in the disclosing of the special laws that regulate the origin, existence, development, death of a given social organism and its replacement by another and higher one. And it is this value that, in point of fact, Marx's book has."

> "Whilst the writer pictures what he takes to be actually my method, in this striking and (as far as concerns my own application of it) generous way, what else is he picturing but *the dialectic method*? (Marx 1873 [1954]. Emphasis added.)

That the method employed in *Das Kapital* had been little understood did not however prompt Marx to reconsider his old pledge of writing 2 or 3 sheets on 'Dialectics':

> "The explanation Marx himself gave (in the Afterword to the second German Edition) of the importance of this method for the structure and exposition of *Capital*, has often been misconstrued – whether honestly or not – to mean simply that in the formulation of his work, and in particular of the chapter on the theory of value, Marx flirted here and there with the peculiar mode of expression of the Hegelian dialectic. When we look closer however, we recognise that even the explanation given by Marx himself goes much further than that. It implies in fact that he fully espoused the rational kernel (if not the mystical shell) of the dialectical method. For all the empirical stringency which Marx, as a scientific investigator brought to his observation of the concrete reality of socio-economic and historical facts, the reader who lacks a strict philosophical training will still find the very simple concepts of commodity, value, and form of value, rather schematic, abstract, and unreal at first sight. Yet these concepts are supposed to anticipate entirely, to contain within themselves, like a germ as yet undeveloped, the concrete reality of the whole process of being and becoming, genesis, development, and decline of the present-day mode of production and social order – and the concepts do indeed anticipate these realities. It is only that the connection is obscure or even invisible to the common eye. But the one who is aware of the connection, the author himself, the 'demiurge' who has re-created reality in the form of these concepts, *refuses to betray the secret of his knowledge at the outset*." (Korsch (1932; emphasis added).

And no wonder there remained blanks of ambiguities that the later imaginative exercises sought to fill in many divisive ways. Moreover, Marx appears to have been in jest when he wrote in the 'Afterword' (as quoted earlier): "I therefore openly avowed myself the pupil of that mighty thinker, and even here and there, in the chapter on the theory of value, *coquetted with the modes of expression* peculiar to him." (emphasis added). His use of the term 'coquetted with' implies only a superficial attachment and 'modes of expression', a sharp contrast in substance. However, it goes without saying that nobody would believe Marx *only toyed with* Hegelian *terminology*. In fact, his philosophical method was saturated with the spirit of Hegelian dialectics, which unfortunately he 'refused to betray at the outset' of his analytical works, leading to unintentional chaos. Brilliantly and meticulously did he analyze the process of development and functioning of capitalism in his *magnum opus* in the framework of this philosophical method. Passages are aplenty that exemplify all the three

laws of dialectics such as i) unity of the opposites, ii) transformation of quantity into quality, and iii) negation of the negation.[1]

Marx identified "antagonistic forms of commodities" and unity of opposites ("unities of use-value and value") in commodity production and exchange (Marx 1873 [1954]); he saw the metamorphosis of commodity in terms of a sale (commodity – money) and a purchase (money – commodity):

> "To say that these two independent and antithetical acts have an intrinsic unity, are essentially one, is the same as to say that this intrinsic oneness expresses itself in an external antithesis. …. The antithesis, use-value and value; the contradictions that private labour is bound to manifest itself as direct social labour, that a particularised concrete kind of labour has to pass for abstract human labour; the contradiction between the personification of objects and the representation of persons by things; all these antitheses and contradictions, which are immanent in commodities, assert themselves, and develop their modes of motion, in the antithetical phases of the metamorphosis of a commodity." (Marx 1873 [1954])

He saw these contradictions as the driving force of capitalist development with the hallmark that

> "each single transaction invariably conforms to the laws of the exchange of commodities, the capitalist buying labour-power, the labourer selling it, and we will assume at its real value; in so far as all this is true, it is evident that the laws of appropriation or of private property, laws that are based on the production and circulation of commodities, become by their own inner and inexorable dialectic changed into their very opposite." (Marx 1873 [1954])

In this powerful dialectical light, he was able to find that

> "property turns out to be the right, on the part of the capitalist, to appropriate the unpaid labour of others or its product, and to be the impossibility, on the part of the labourer, of appropriating his own product. The separation of property from labour has become the necessary consequence of a law that apparently originated in their identity." (*ibid*.)

[1] We will discuss these in detail later on in the section on Engels.

The law of transformation of quantity into quality appears in Chapter 11 of *Capital, Volume I*; while discussing the rate and mass of surplus value, Marx outlined "the transformation of the master of a trade into a capitalist":

> "A certain stage of capitalist production necessitates that the capitalist be able to devote the whole of the time during which he functions as a capitalist, *i.e.*, as personified capital, to the appropriation and therefore control of the labour of others, and to the selling of the products of this labour. The guilds of the middle ages therefore tried to prevent by force the transformation of the master of a trade into a capitalist, by limiting the number of labourers that could be employed by one master within a very small maximum. The possessor of money or commodities actually turns into a capitalist in such cases only where the minimum sum advanced for production greatly exceeds the maximum of the middle ages. Here, as in natural science, is shown the correctness of the law discovered by Hegel (in his "Logic"), that merely quantitative differences beyond a certain point pass into qualitative changes." (Marx 1873 [1954])

Marx added the following to the third edition of *Capital*: "The molecular theory of modern chemistry first scientifically worked out by Laurent and Gerhardt rests on no other law."[2]

And finally, the law of the negation of the negation appears in the powerful presentation of Chapter 32 on 'Historical Tendency of Capitalist Accumulation':

> "What does the primitive accumulation of capital, *i.e.*, its historical genesis, resolve itself into? In so far as it is not immediate transformation of slaves and serfs into wage labourers, and therefore a mere change of form, it only means the expropriation of the immediate producers, *i.e.*, the dissolution of private property based on the labour of its owner. Private property, as the antithesis to social, collective property, exists only where the means of labour and the external conditions of labour belong to private individuals. But according as these private individuals are labourers or not labourers, private property has a different character. The numberless shades, that it at first sight presents, correspond to the intermediate stages lying between these two extremes. The private property of the labourer in his means of production is the foundation of petty

[2] This now appears as a footnote with a brief explanation by Engels meant for nonchemists; Marx also wrote to Engels about this on 22 June 1867.

industry, whether agricultural, manufacturing, or both; petty industry, again, is an essential condition for the development of social production and of the free individuality of the labourer himself. Of course, this petty mode of production exists also under slavery, serfdom, and other states of dependence. But it flourishes, it lets loose its whole energy, it attains its adequate classical form, only where the labourer is the private owner of his own means of labour set in action by himself: the peasant of the land which he cultivates, the artisan of the tool which he handles as a virtuoso. This mode of production presupposes parcelling of the soil and scattering of the other means of production. As it excludes the concentration of these means of production, so also it excludes cooperation, division of labour within each separate process of production, the control over, and the productive application of the forces of Nature by society, and the free development of the social productive powers. It is compatible only with a system of production, and a society, moving within narrow and more or less primitive bounds. To perpetuate it would be, as Pecqueur rightly says, "to decree universal mediocrity". At a certain stage of development, it brings forth the material agencies for its own dissolution. From that moment new forces and new passions spring up in the bosom of society; but the old social organization fetters them and keeps them down. It must be annihilated; it is annihilated. Its annihilation, the transformation of the individualized and scattered means of production into socially concentrated ones, of the pigmy property of the many into the huge property of the few, the expropriation of the great mass of the people from the soil, from the means of subsistence, and from the means of labour, this fearful and painful expropriation of the mass of the people forms the prelude to the history of capital. It comprises a series of forcible methods, of which we have passed in review only those that have been epoch-making as methods of the primitive accumulation of capital. The expropriation of the immediate producers was accomplished with merciless Vandalism, and under the stimulus of passions the most infamous, the most sordid, the pettiest, the most meanly odious. Self-earned private property, that is based, so to say, on the fusing together of the isolated, independent labouring individual with the conditions of his labour, is supplanted by capitalistic private property, which rests on exploitation of the nominally free labour of others, *i.e.*, on wage labour.[3]

[3] "*Nous sommes dans une condition tout-à-fait nouvelle de la societé... nous tendons a séparer toute espèce de propriété d'avec toute espèce de travail.*" ["We are in a situation

"As soon as this process of transformation has sufficiently decomposed the old society from top to bottom, as soon as the labourers are turned into proletarians, their means of labour into capital, as soon as the capitalist mode of production stands on its own feet, then the further socialization of labour and further transformation of the land and other means of production into socially exploited and, therefore, common means of production, as well as the further expropriation of private proprietors, takes a new form. That which is now to be expropriated is no longer the labourer working for himself, but the capitalist exploiting many labourers. This expropriation is accomplished by the action of the immanent laws of capitalistic production itself, by the centralization of capital. One capitalist always kills many. Hand in hand with this centralization, or this expropriation of many capitalists by few, develop, on an ever-extending scale, the cooperative form of the labour process, the conscious technical application of science, the methodical cultivation of the soil, the transformation of the instruments of labour into instruments of labour only usable in common, the economizing of all means of production by their use as means of production of combined, socialized labour, the entanglement of all peoples in the net of the world market, and with this, the international character of the capitalistic regime. Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself. The monopoly of capital becomes a fetter upon the mode of production, which has sprung up and flourished along with, and under it. Centralization of the means of production and socialization of labour at last reach a point where they become incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated.

"The capitalist mode of appropriation, the result of the capitalist mode of production, produces capitalist private property. This is the first negation of individual private property, as founded on the labour of the proprietor. But capitalist production begets,

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which is entirely new for society ... we are striving to separate every kind of property from every kind of labour."] (Sismondi: "*Nouveaux Principes d'Econ. Polit.*" t.II, p.434.) [Footnote as in the original.]

with the inexorability of a law of Nature, its own negation. It is the negation of negation. This does not re-establish private property for the producer, but gives him individual property based on the acquisition of the capitalist era: *i.e*., on cooperation and the possession in common of the land and of the means of production.

"The transformation of scattered private property, arising from individual labour, into capitalist private property is, naturally, a process, incomparably more protracted, violent, and difficult, than the transformation of capitalistic private property, already practically resting on socialized production, into socialized property. In the former case, we had the expropriation of the mass of the people by a few usurpers; in the latter, we have the expropriation of a few usurpers by the mass of the people."[4] (Marx 1887 [1954]).

One of the most ardent appreciations of this analysis came later on from Rosa Luxemburg (1871 – 1919), who wrote in her *magnum opus*, *The Accumulation of Capital*:

"Marx had to establish a dynamic distinction in the course of history between the commodity producer and the labouring man, in order to distinguish the twin aspects of labour which appear static in bourgeois economy. He had to discover that the production of commodities is a definite historical form of social production before he could decipher the hieroglyphics of capitalist economy. In a word, Marx had to approach the problem with methods of deduction diametrically opposed to those of the classical school, he had in his approach to renounce the latter's faith in the human

[4] The advance of industry, whose involuntary promoter is the bourgeoisie, replaces the isolation of the labourers, due to competition, by their revolutionary combination, due to association. The development of Modern Industry, therefore, cuts from under its feet the very foundation on which the bourgeoisie produces and appropriates products. What the bourgeoisie, therefore, produces, above all, are its own grave-diggers. Its fall and the victory of the proletariat are equally inevitable.... Of all the classes that stand face-to-face with the bourgeoisie today, the proletariat alone is a really revolutionary class. The other classes perish and disappear in the face of Modern Industry, the proletariat is its special and essential product.... The lower middle classes, the small manufacturers, the shopkeepers, the artisan, the peasant, all these fight against the bourgeoisie, to save from extinction their existence as fractions of the middle class... they are reactionary, for they try to roll back the wheel of history. Karl Marx and Friedrich Engels, "*Manifest der Kommunistischen Partei*," London, 1848, pp. 9, 11. [Footnote as in the original.]

> and normal element in bourgeois production and to recognise their historical transience: he had to reverse the metaphysical deductions of the classics into their opposite, the dialectical." (Luxemburg 1913).
>
> "….. the keen dialectics of scientific analysis were required to reveal how the right of ownership changes in the course of accumulation into appropriation of other people's property, how commodity exchange turns into exploitation and equality becomes class-rule." (Luxemburg 1913).

However, for Marx's contemporary Eugen Karl Dühring (1833–1921),

> "… this mysterious dialectical rubbish will tempt no one who has even a modicum of sound judgment left to have anything to do ... with these deformities of thought and style. With the demise of the last relics of the dialectical follies this means of duping ... will lose its deceptive influence, and no one will any longer believe that he has to torture himself in order to get behind some profound piece of wisdom where the husked kernel of the abstruse things reveals at best the features of ordinary theories if not of absolute commonplaces... It is quite impossible to reproduce the" (Marxian) "maze in accordance with the Logos doctrine without prostituting sound logic." (Quoted in Engels 1878 [1947]).

It now behoved Engels to respond to this tirade in his *Anti- Dühring* (1878) and he quoted Dühring as "giving us at least two examples of the unsound Marxian Logos doctrine"; one on the law of transformation of quantity into quality with which Marx outlined "the transformation of the master of a trade into a capitalist", and the other on the law of the negation of the negation, the law by which "the expropriators are expropriated". On the former, Dühring had written:

> "How comical is the reference to the confused, hazy Hegelian notion that quantity changes into quality, and that therefore an advance, when it reaches a certain size, becomes capital by this quantitative increase alone." (Quoted in Engels 1878 [1947]).

And on the latter:

> "This historical sketch" (of the genesis of the so-called primitive accumulation of capital in England) "is relatively the best part of Marx's book, and would be even better if it had not relied on the dialectical crutch to help out its scholarly crutch. The

> Hegelian negation of the negation, in default of anything better and clearer, has in fact to serve here as the midwife to deliver the future from the womb of the past. The abolition of 'individual property', which since the sixteenth century has been effected in the way indicated above, is the first negation. It will be followed by a second, which bears the character of a negation of the negation and hence of a restoration of 'individual property', but in a higher form, based on the common ownership of land and of the instruments of labour. Herr Marx calls this new 'individual property' also 'social property', and in this there appears the Hegelian higher unity, in which the contradiction is supposed to be sublated, that is to say, in the Hegelian verbal jugglery, both overcome and preserved... According to this, the expropriation of the expropriators is, as it were, the automatic result of historical reality in its materially external relations... It would be difficult to convince a sensible man of the necessity of the common ownership of land and capital, on the basis of credence in Hegelian word juggling such as the negation of the negation .... The nebulous hybrids of Marx's conceptions will not however appear strange to anyone who realises what nonsense can be concocted with Hegelian dialectics as the scientific basis, or rather what nonsense must necessarily spring from it. For the benefit of the reader who is not familiar with these artifices, it must be pointed out expressly that Hegel's first negation is the catechismal idea of the fall from grace and his second is that of a higher unity leading to redemption. The logic of facts can hardly be based on this nonsensical analogy borrowed from the religious sphere ..... Herr Marx remains cheerfully in the nebulous world of his property which is at once both individual and social and leaves it to his adepts to solve for themselves this profound dialectical enigma." (Quoted in Engels 1878 [1947]).

Engels now characterised

> "Herr Dühring's total lack of understanding of the nature of dialectics… by the very fact that he regards it as a mere proof-producing instrument, as a limited mind might look upon formal logic or elementary mathematics. …….To attempt to prove anything by means of dialectics alone to a crass metaphysician like Herr Dühring would be as much a waste of time as was the attempt made by Leibniz and his pupils to prove the principles of the infinitesimal calculus to the mathematicians of their time." (Engels 1878 [1947]).

And he sought to explain and salvage the Marxian position:

> "…. by characterising the process as the negation of the negation, Marx does not intend to prove that the process was historically necessary. On the contrary: only after he has proved from history that in fact the process has partially already occurred, and partially must occur in the future, he in addition characterises it as a process which develops in accordance with a definite dialectical law. That is all. It is therefore once again a pure distortion of the facts by Herr Dühring when he declares that the negation of the negation has to serve here as the midwife to deliver the future from the womb of the past, or that Marx wants anyone to be convinced of the necessity of the common ownership of land and capital (which is itself a Dühringian contradiction in corporeal form) on the basis of credence in the negation of the negation." (Engels 1878 [1947]).

It was Dühring's attack that posed for the first time the question of the function and status of dialectics in Marxism and prompted Engels to seek to defend their scientific method. This required him to prepare himself to be armed with scientific knowledge before mounting a counter-attack. He sketched out the background of *Anti- Dühring* in his 'Preface' to its second edition (1885):

> "Marx and I were pretty well the only people to rescue conscious dialectics from German idealist philosophy and apply it in the materialist conception of nature and history. But a knowledge of mathematics and natural science is essential to a conception of nature which is dialectical and at the same time materialist. Marx was well versed in mathematics, but we could keep up with natural science only piecemeal, intermittently and sporadically. For this reason, when I retired from business and transferred my home to London, thus enabling myself to give the necessary time to it, I went through as complete as possible a "moulting", as Liebig calls it, in mathematics and the natural sciences, and spent the best part of eight years on it. I was right in the middle of this "moulting" process when it happened that I had to occupy myself with Herr Dühring's so-called natural philosophy." (Engels 1885 [1947]).

*Dialectics of Nature* was the culmination in 1886 of this profound scientific 'moulting'. He was however able to provide detailed scientific discussion on dialectics, its brief historical development and its distinction in Marxism, while dissecting Dühring's philosophy itself.

Thus he wrote in his 1878 ‘Old Preface to Anti-Dühring: On Dialectics’ that appeared later on as part of his *Dialectics of Nature* that Aristotle and Hegel had been the only two thinkers who had fairly closely investigated dialectics. In Greek philosophy, dialectical thought had appeared in its pristine simplicity. The Greeks had viewed nature as a whole, in general, just because they had not yet been advanced enough to dissect, analyse nature. The universal connection of natural phenomena had not been proved in regard to particular; to the Greeks, it had been the result of direct contemplation. Herein Engels identified the inadequacy of Greek philosophy, on account of which it had yielded later to other modes of outlook on the world. The Hegelian dialectics, on the other hand, had developed from an utterly erroneous idealist point of departure.

> “It is the merit of Marx that, in contrast to the “peevish, arrogant, mediocre Epigonoi who now talk large in Germany”, he was the first to have brought to the fore again the forgotten dialectical method, its connection with Hegelian dialectics and its distinction from the latter, and at the same time to have applied this method in *Capital* to the facts of an empirical science, political economy. And he did it so successfully that even in Germany the newer economic school rises above the vulgar free-trade system only by copying from Marx (often enough incorrectly), on pretence of criticising him.” (Engels 1878 [1954]).

Engels then went on to consider some instances of development of theories in natural science, “in which the real relation is stood on its head, the reflection is taken for the original form, and which consequently need to be turned right side up again”, in reminiscence of the Marxian ‘inversion’ of the Hegelian dialectics.

> “When for almost two centuries heat was considered a special mysterious substance instead of a form of motion of ordinary matter, that was precisely such a case and the mechanical theory of heat carried out the inverting. Nevertheless physics dominated by the caloric theory discovered a series of highly important laws of heat and cleared the way, particularly through Fourier and Sadi Carnot, for the correct conception, which now for its part had to put right side up the laws discovered by its predecessor, to translate them into its own language. (Carnot’s function C literally inverted: 1/C = absolute temperature. Without this inversion nothing can be done with it.) Similarly, in chemistry the phlogistic theory first supplied the material, by a hundred years of experimental work, with the aid of which Lavoisier was able to discover in the

> oxygen obtained by Priestley the real antipode of the fantastic phlogiston and thus could throw overboard the entire phlogistic theory. But this did not in the least do away with the experimental results of phlogistics. On the contrary, they persisted, only their formulation was inverted, was translated from the phlogistic into the now valid chemical language and thus they retained their validity.
>
> "The relation of Hegelian dialectics to rational dialectics is the same as that of the caloric theory to the mechanical theory of heat and that of the phlogistic theory to the theory of Lavoisier." (Engels 1878 [1954]).

Thus started Engels' uncontrolled fascination for leaning on convenient instances that came in handy from natural science. The concluding line above speaks volumes for that. What he wrote in the 'Introduction (General)' of *Anti-Dühring* (Engels 1878 [1947]) again reverberated in his 1880 *Socialism, Utopian and Scientific*:

> "Nature is the proof of dialectics, and it must be said for modern science that it has furnished this proof with very rich materials increasingly daily, and thus has shown that, in the last resort, Nature works dialectically and not metaphysically; that she does not move in the eternal oneness of a perpetually recurring circle, but goes through a real historical evolution. In this connection, Darwin must be named before all others. He dealt the metaphysical conception of Nature the heaviest blow by his proof that all organic beings, plants, animals, and man himself, are the products of a process of evolution going on through millions of years. But, the naturalists, who have learned to think dialectically, are few and far between, and this conflict of the results of discovery with preconceived modes of thinking, explains the endless confusion now reigning in theoretical natural science, the despair of teachers as well as learners, of authors and readers alike.
>
> "An exact representation of the universe, of its evolution, of the development of mankind, and of the reflection of this evolution in the minds of men, can therefore only be obtained by the methods of dialectics with its constant regard to the innumerable actions and reactions of life and death, of progressive or retrogressive changes. And in this spirit, the new German philosophy has worked. Kant began his career by resolving the stable Solar system of Newton and its eternal duration, after the famous initial impulse had once been given, into the result of a historical process,

the formation of the Sun and all the planets out of a rotating, nebulous mass. From this, he at the same time drew the conclusion that, given this origin of the Solar system, its future death followed of necessity. His theory, half a century later, was established mathematically by Laplace, and half a century after that, the spectroscope proved the existence in space of such incandescent masses of gas in various stages of condensation…..

"…. Modern materialism embraces the more recent discoveries of natural science, according to which Nature also has its history in time, the celestial bodies, like the organic species that, under favourable conditions, people them, being born and perishing. And even if Nature, as a whole, must still be said to move in recurrent cycles, these cycles assume infinitely larger dimensions. In both aspects, modern materialism is essentially dialectic, and no longer requires the assistance of that sort of philosophy which, queen-like, pretended to rule the remaining mob of sciences. As soon as each special science is bound to make clear its position in the great totality of things and of our knowledge of things, a special science dealing with this totality is superfluous or unnecessary. That which still survives of all earlier philosophy is the science of thought and its law – formal logic and dialectics. Everything else is subsumed in the positive science of Nature and history." (Engels 1880 [1970]).

And finally this fascination fructified in his *Dialectics of Nature*, designed to integrate historical materialism into the philosophy of nature, to show that Marxism was based on certain laws of nature such that a single ontology covered both nature and humanity. Dialectical laws were now taken as the sole analytical tools to look into natural and social processes alike. Engels made full use of the erstwhile development of scientific theories and findings and brilliantly fitted them in with dialectical laws. An apt example here is his famous pamphlet *The Part Played by Labour in the Transition from Ape to Man*, included in *Dialectics of Nature,* in which he argued that human hand and brain grew together – an idea supported by later fossil discoveries:

"… when their mode of life involved locomotion on level ground, the apes gradually got out of the habit of using their hands in walking and adopted a more and more erect posture. This was *the decisive step in the transition from ape to man.*….

"The first operations for which our ancestors gradually learned to adapt their hands during the many thousands of years of transition from ape to man could have been

> only very simple ones. …. Before the first flint could be fashioned into a knife by human hands, a period of time probably elapsed in comparison with which the historical period known to us appears insignificant. But the decisive step had been taken, *the hand had become free* and could henceforth attain ever greater dexterity; the greater flexibility thus acquired was inherited and increased from generation to generation….
>
> "First labour, after it and then with it speech – these were the two most essential stimuli under the influence of which the brain of the ape gradually changed into that of man, which, for all its similarity is far larger and more perfect. Hand in hand with the development of the brain went the development of its most immediate instruments – the senses. Just as the gradual development of speech is inevitably accompanied by a corresponding refinement of the organ of hearing, so the development of the brain as a whole is accompanied by a refinement of all the senses." (Engels 1886 [1954])

However, it should be noted that Engels was apologetic in a general way in the 'Preface' to the second edition of *Anti-Dühring* for possible inadequacies in his knowledge of theoretical natural science, although he retracted nothing. While explaining the background of his 'moulting' in natural science during his retired life in London and his encounter with Herr Dühring's philosophy, he continued:

> "It was …. only too natural that in dealing with this subject I was sometimes unable to find the correct technical expression, and in general moved with considerable clumsiness in the field of theoretical natural science. On the other hand, my lack of assurance in this field, which I had not yet overcome, made me cautious, and I cannot be charged with real blunders in relation to the facts known at that time or with incorrect presentation of recognised theories." (Engels 1885 [1947]).

Note that Engels' exposition of dialectics started with a critique (in *Ludwig Feuerbach and the End of Classical German Philosophy*, 1886) of Hegel's principle of the identity of thinking and being; as we have seen and quoted above, he sought, like Marx, to do away with this "ideological perversion", because we comprehend "the concepts in our heads materialistically – as images of real things instead of regarding real things as images of this or that stage of the absolute concept". This 'inversion' of Hegel was important for Engels, as he maintained nature as primary and spirit as a product of matter. This also meant that the ontic priority Hegel accorded to the Idea be replaced by the temporal priority of matter. Thus it was

only “the revolutionary side of Hegelian philosophy”, “freed from the idealist trimmings”, that was taken up by Marxism, which asserted that:

> “The great basic thought that the world is not to be comprehended as a complex of readymade *things*, but as a complex of *processes*, in which the things apparently stable no less than their mind images in our heads, the concepts, go through an uninterrupted change of coming into being and passing away, in which, in spite of all seeming accidentally and of all temporary retrogression, a progressive development asserts itself in the end – this great fundamental thought has, especially since the time of Hegel, so thoroughly permeated ordinary consciousness that in this generality it is now scarcely ever contradicted.” (Engels 1886 [1970]).

Thus (as quoted earlier), dialectics was reduced “to the science of the general laws of motion, both of the external world and of human thought”; the relationship of *identity* between the objective and subjective (in Hegel) was reduced to a *dialectical unity* between the two. What was new in this formulation, beyond this fact, was that dialectics was now extended to nature; nature and man were posited in a relationship of dialectical unity, mediated through praxis or activity. Thus Engels stated in the ‘Preface’ to the second edition of *Anti-Dühring*:

> “It goes without saying that my recapitulation of mathematics and the natural sciences was undertaken in order to convince myself also in detail – of what in general I was not in doubt – that *in nature, amid the welter of innumerable changes, the same dialectical laws of motion force their way through as those which in history govern the apparent fortuitousness of events*; the same laws which similarly form the thread running through the history of the development of human thought and gradually rise to consciousness in thinking man; the laws which Hegel first developed in all-embracing but mystic form, and which we made it one of our aims to strip of this mystic form and to bring clearly before the mind in their complete simplicity and universality. It goes without saying that the old philosophy of nature – in spite of its real value and the many fruitful seeds it contained – was unable to satisfy us. As is more fully brought out in this book, natural philosophy, particularly in the Hegelian form, erred because *it did not concede to nature any development in time*, any “succession”, but only “co-existence”. This was on the one hand grounded in the Hegelian system itself, which ascribed historical evolution only to the “spirit”, but on the other hand was also due to the whole state of the natural sciences in that period. In

> this Hegel fell far behind Kant, whose nebular theory had already indicated the origin of the solar system, and whose discovery of the retardation of the earth's rotation by the tides also had proclaimed the doom of that system. And finally, *to me there could be no question of building the laws of dialectics into nature, but of discovering them in it and evolving them from it*." (Engels 1885 [1947; emphasis added]).

His discovery that "Nature is the proof of dialectics, and …. modern science has …. shown that …. Nature works dialectically" led him to three "most general laws": the law of the transformation of quantity into quality and *vice versa*; the law of the interpenetration of opposites; and the law of the negation of the negation. He credited all the three to Hegel, who had developed them "in his idealist fashion as mere laws of *thought* …..

> "The mistake lies in the fact that these laws are foisted on nature and history as laws of thought, and not deduced from them. This is the source of the whole forced and often outrageous treatment; the universe, willy-nilly, is made out to be arranged in accordance with a system of thought which itself is only the product of a definite stage of evolution of human thought. If we turn the thing round, then everything becomes simple, and the dialectical laws that look so extremely mysterious in idealist philosophy at once become simple and clear as noonday." (Engels 1886 [1954]).

In Chapter 12 and Chapter 13 in Part I ('Philosophy') of *Anti-Dühring*, Engels endeavored to exposit and defend the extension of dialectics to nature. According to him, "we do not run up against any contradictions" in nature "so long as we consider things as at rest and lifeless"; but "as soon as we consider things in their motion, their change, their life, their reciprocal influence on one another", then

> "we immediately become involved in contradictions. Motion itself is a contradiction: even simple mechanical change of position can only come about through a body being at one and the same moment of time both in one place and in another place, being in one and the same place and also not in it. And the continuous origination and simultaneous solution of this contradiction is precisely what motion is." (Engels 1878 [1947])

It is interesting to compare this passage with one in Hegel's *Science of Logic*; that Engels was blindly following Hegel cannot escape one's scrutiny here:

> "Something moves, not because at one moment it is here and at another there, but because at one and the same moment it is here and not here, because in this 'here', it at once is and is not. The ancient dialecticians must be granted the contradictions that they pointed out in motion; but it does not follow that therefore there is no motion, but on the contrary, that motion is *existent* contradiction itself." (Hegel 1812 [1969]).

Hegel was repeating from Zeno's paradoxes of motion, despite Aristotle's critical solutions; in his *Physics*, Aristotle had criticized Zeno's reasoning as fallacious:

> "Zeno's arguments about motion, which cause so much disquietude to those who try to solve the problems that they present, are four in number. The first asserts the non-existence of motion on the ground that that which is in locomotion must arrive at the half-way stage before it arrives at the goal....
>
> "The second is the so-called 'Achilles', and it amounts to this, that in a race the quickest runner can never overtake the slowest, since the pursuer must first reach the point whence the pursued started, so that the slower must always hold a lead. This argument is the same in principle as that which depends on bisection, though it differs from it in that the spaces with which we successively have to deal are not divided into halves. The result of the argument is that the slower is not overtaken: but it proceeds along the same lines as the bisection-argument (for in both a division of the space in a certain way leads to the result that the goal is not reached, though the 'Achilles' goes further in that it affirms that even the quickest runner in legendary tradition must fail in his pursuit of the slowest), so that the solution must be the same. And the axiom that that which holds a lead is never overtaken is false: it is not overtaken, it is true, while it holds a lead: but it is overtaken nevertheless if it is granted that it traverses the finite distance prescribed. These then are two of his arguments.
>
> "The third is that …. if everything when it occupies an equal space is at rest, and if that which is in locomotion is always occupying such a space at any moment, the flying arrow is therefore motionless. This is false, for time is not composed of indivisible moments any more than any other magnitude is composed of indivisibles.
>
> "The fourth argument is that concerning the two rows of bodies, each row being composed of an equal number of bodies of equal size, passing each other on a race-course as they proceed with equal velocity in opposite directions, the one row

> originally occupying the space between the goal and the middle point of the course and the other that between the middle point and the starting-post. This, he thinks, involves the conclusion that half a given time is equal to double that time. The fallacy of the reasoning lies in the assumption that a body occupies an equal time in passing with equal velocity a body that is in motion and a body of equal size that is at rest; which is false." (Aristotle 350 BC [1994]: paragraph positions are slightly altered.)

Hegel in the above passage accepted Zeno's argument that motion is contradictory, but unlike Zeno (who had argued that motion is contradictory and hence an illusion), concluded that "motion is *existent* contradiction itself". It is difficult to infer what Hegel actually meant here and the blanks of ambiguity have led to diverse interpretations. As Acton maintains:

> "If he intended to argue that contradictory propositions could both be true, that 'both *p* and not-*p*', then he was wrong and so was Engels in following him. For it can be proved that from any pair of contradictory propositions any conclusion we like can be deduced and hence that if contradictories are true, *anything* can be true. In this logical sense the term *contradiction* has its appropriate use in thought or discourse, as Dühring had argued. In saying that something both is and is not in the same place at the same time, that it is true both that it is in *p* at time *t* and that it is not in *p* at time *t*, the whole negating force of the word *not* is lost. Either, then, Hegel's philosophy has no value or he must have meant by 'contradiction' something different from what formal logicians mean by it. It is likely enough that it is the second alternative that is correct. In attacking Dühring, Engels seems to have committed himself to the first alternative. He adopted a speculative, nonempirical thesis, for whereas movement is something that can be observed in natural things and events, contradiction is not observable in them. What Engels did in his argument about contradiction in the nature of things was to provide one of Zeno's paradoxes with a merely verbal, and indeed absurd, 'solution'." (Acton 2006)

Engels along with Hegel seems to have erred in taking 'contradiction' as applied to objective world to mean 'logical contradiction' in respect of motion; it may however be argued that Engels erred only in choosing his terminology; having been carried away by his Hegelian loyalty, he appears to have been eager to use Hegelian wordings, already pregnant with unnecessary blanks. This will become clear if we read his above passage along with his brief note for Chapter 12 given in his Preparatory Writings for *Anti-Dühring*:

> "Antithesis – if a thing is saddled with its antithesis, it is in contradiction with itself, and so is its expression in thought. For example, there is a *contradiction in a thing remaining the same and yet constantly changing*, being possessed of the antithesis of 'inertness' and 'change'." (Engels 1878 [1947]; emphasis added.)

This brief note clearly shows Engels was in good command of the concept of contradiction in the framework of the dialectical triad. Why then he chose to describe contradiction in motion in terms of the uncrackable Hegelian wordings when he could have explained it in the above line of reasoning remains a mystery. Anyhow, unaware of the consequences, he went on to the law of the transformation of quantity into quality, according to which certain changes in nature involve "*qualitative leap*" rather than gradual accretion, and like Hegel, gave

> "one of the best-known examples – that of the change of the aggregate states of water, which under normal atmospheric pressure changes at 0° C from the liquid into the solid state, and at 100°C from the liquid into the gaseous state, so that at both these turning-points the merely quantitative change of temperature brings about a qualitative change in the condition of the water." (Engels 1878 [1947])

He then took up the footnote added by Marx to the third edition of *Capital*: "The molecular theory of modern chemistry first scientifically worked out by Laurent and Gerhardt rests on no other law", and provided a detailed explanation:

> "What is referred to here is the homologous series of carbon compounds, of which a great many are already known and each of which has its own algebraic formula of composition. If, for example, as is done in chemistry, we denote an atom of carbon by C, an atom of hydrogen by H, an atom of oxygen by O, and the number of atoms of carbon contained in each compound by *n*, the molecular formulas for some of these series can be expressed as follows:
>
> $C_nH_{2n+2}$ — the series of normal paraffins
>
> $C_nH_{2n+2}O$ — the series of primary alcohols
>
> $C_nH_{2n}O_2$ — the series of the monobasic fatty acids.
>
> Let us take as an example the last of these series, and let us assume successively that $n = l$, $n = 2$, $n = 3$, etc. We then obtain the following results (omitting the isomers):

$CH_2O_2$ — formic acid: boiling point 100°; melting point 1°

$C_2H_4O_2$ — acetic acid: boiling point 118°; melting point 17°

$C_3H_6O_2$ — propionic acid: boiling point 140°; melting point —

$C_8H_8O_2$ — butyric acid: boiling point 162°; melting point —

$C_5H_{10}O_2$ — valerianic acid: boiling point 175°; melting point —

and so on to $C_{50}H_{60}O_2$, melissic acid, which melts only at 80° and has no boiling point at all, because it cannot evaporate without disintegrating.

Here therefore we have a whole series of qualitatively different bodies, formed by the simple quantitative addition of elements, and in fact always in the same proportion. This is most clearly evident in cases where the quantity of all the elements of the compound changes in the same proportion. Thus, in the normal paraffins $C_nH_{2n+2}$, the lowest is methane, $CH_4$, a gas; the highest known, hexadecane, $C_{16}H_{34}$, is a solid body forming colourless crystals which melts at 21° and boils only at 278°. Each new member of both series comes into existence through the addition of $CH_2$, one atom of carbon and two atoms of hydrogen, to the molecular formula of the preceding member, and this quantitative change in the molecular formula produces each time a qualitatively different body.

These series, however, are only one particularly obvious example; throughout practically the whole of chemistry, even in the various nitrogen oxides and oxygen acids of phosphorus or sulphur, one can see how “quantity changes into quality”, and this allegedly confused, hazy Hegelian notion appears in so to speak corporeal form in things and processes – and no one but Herr Dühring is confused and befogged by it. And if Marx was the first to call attention to it, and if Herr Dühring read the reference without even understanding it (otherwise he would certainly not have allowed this unparalleled outrage to pass unchallenged), this is enough – even without looking back at the famous Dühringian philosophy of nature – to make it clear which of the two, Marx or Herr Dühring, is lacking in “the eminently modern educative elements provided by the natural-scientific mode of thought” and in acquaintance with the “main achievements of ... chemistry”.” (Engels 1878 [1947])

It is interesting to compare these passages with those of Hegel (quoted above) for originality of idea.

The second law, that of the interpenetration of opposites, which is now called the law of the unity and struggle of opposites, was explicated in terms of contradiction, which we have already discussed. It should be noted that this law did not receive as much attention from Engels as the other two (with two separate chapters devoted to them in *Anti-Dühring*).

The third law, that of the negation of the negation, occupies the entire Chapter 13 of *Anti-Dühring*. Engels characterised it as a

> "very simple process which is taking place everywhere and every day, which any child can understand as soon as it is stripped of the veil of mystery in which it was enveloped by the old idealist philosophy and in which it is to the advantage of helpless metaphysicians of Herr Dühring's calibre to keep it enveloped",

and continued vigorously with numerous examples:

> "Let us take a grain of barley. Billions of such grains of barley are milled, boiled and brewed and then consumed. But if such a grain of barley meets with conditions which are normal for it, if it falls on suitable soil, then under the influence of heat and moisture it undergoes a specific change, it germinates; the grain as such ceases to exist, it is negated, and in its place appears the plant which has arisen from it, the negation of the grain. But what is the normal life-process of this plant? It grows, flowers, is fertilised and finally once more produces grains of barley, and as soon as these have ripened the stalk dies, is in its turn negated. As a result of this negation of the negation we have once again the original grain of barley, but not as a single unit, but ten-, twenty- or thirtyfold. Species of grain change extremely slowly, and so the barley of today is almost the same as it was a century ago. But if we take a plastic ornamental plant, for example a dahlia or an orchid, and treat the seed and the plant which grows from it according to the gardener's art, we get as a result of this negation of the negation not only more seeds, but also qualitatively improved seeds, which produce more beautiful flowers, and each repetition of this process, each fresh negation of the negation, enhances this process of perfection.
>
> "With most insects, this process follows the same lines as in the case of the grain of barley. Butterflies, for example, spring from the egg by a negation of the egg, pass

through certain transformations until they reach sexual maturity, pair and are in turn negated, dying as soon as the pairing process has been completed and the female has laid its numerous eggs. We are not concerned at the moment with the fact that with other plants and animals the process does not take such a simple form, that before they die they produce seeds, eggs or offspring not once but many times; our purpose here is only to show that the negation of the negation *really does take place* in both kingdoms of the organic world. Furthermore, the whole of geology is a series of negated negations, a series of successive chatterings of old and deposits of new rock formations. First the original earth crust brought into existence by the cooling of the liquid mass was broken up by oceanic, meteorological and atmospherico-chemical action, and these fragmented masses were stratified on the ocean bed. Local upheavals of the ocean bed above the surface of the sea subject portions of these first strata once more to the action of rain, the changing temperature of the seasons and the oxygen and carbonic acid of the atmosphere. These same influences act on the molten masses of rock which issue from the interior of the earth, break through the strata and subsequently cool off. In this way, in the course of millions of centuries, ever new strata are formed and in turn are for the most part destroyed, ever anew serving as material for the formation of new strata. But the result of this process has been a very positive one: the creation of a soil composed of the most varied chemical elements and mechanically fragmented, which makes possible the most abundant and diversified vegetation.

"It is the same in mathematics. Let us take any algebraic quantity whatever: for example, a. If this is negated, we get -a (minus *a).* If we negate that negation, by multiplying -*a* by -*a*, we get $+a^2$, i.e., the original positive quantity, but at a higher degree, raised to its second power. In this case also it makes no difference that we can obtain the same $a^2$ by multiplying the positive *a* by itself, thus likewise getting $a^2$. For the negated negation is so securely entrenched in $a^2$ that the latter always has two square roots, namely, *a* and -*a.* And the fact that it is impossible to get rid of the negated negation, the negative root of the square, acquires very obvious significance as soon as we come to quadratic equations.

"The negation of the negation is even more strikingly obvious in higher analysis, in those "summations of indefinitely small magnitudes", which Herr Dühring himself declares are the highest operations of mathematics, and in ordinary language are

known as the differential and integral calculus. How are these forms of calculus used? In a given problem, for example, I have two variables, *x* and *y*, neither of which can vary without the other also varying in a ratio determined by the facts of the case. I differentiate *x* and *y*, i.e., I take *x* and *y* as so infinitely small that in comparison with any real quantity, however small, they disappear, that nothing is left of *x* and *y* but their reciprocal relation without any, so to speak, material basis, a quantitative ratio in which there is no quantity. Therefore, *dy*/*dx*, the ratio between the differentials of *x* and *y*, is *dx* equal to 0/0 but 0/0 taken as the expression of *y*/*x*. I only mention in passing that this ratio between two quantities which have disappeared, caught at the moment of their disappearance, is a contradiction; however, it cannot disturb us any more than it has disturbed the whole of mathematics for almost two hundred years. And now, what have I done but negate *x* and *y*, though not in such a way that I need not bother about them any more, not in the way that metaphysics negates, but in the way that corresponds with the facts of the case? In place of *x* and *y*, therefore, I have their negation, *dx* and *dy*, in the formulas or equations before me. I continue then to operate with these formulas, treating *dx* and *dy* as quantities which are real, though subject to certain exceptional laws, and at a certain point I *negate the negation*, i.e., I integrate the differential formula, and in place of *dx* and *dy* again get the real quantities *x* and *y*, and am then not where I was at the beginning, but by using this method I have solved the problem on which ordinary geometry and algebra might perhaps have broken their jaws in vain.

"It is the same in history, as well. All civilised peoples begin with the common ownership of the land. With all peoples who have passed a certain primitive stage, this common ownership becomes in the course of the development of agriculture a fetter on production. It is abolished, negated, and after a longer or shorter series of intermediate stages is transformed into private property. But at a higher stage of agricultural development, brought about by private property in land itself, private property conversely becomes a fetter on production, as is the case today both with small and large landownership. The demand that it, too, should be negated, that it should once again be transformed into common property, necessarily arises. But this demand does not mean the restoration of the aboriginal common ownership, but the institution of a far higher and more developed form of possession in common which, far from being a hindrance to production, on the contrary for the first time will free

production from all fetters and enable it to make full use of modern chemical discoveries and mechanical inventions.

> "Or let us take another example: The philosophy of antiquity was primitive, spontaneously evolved materialism. As such, it was incapable of clearing up the relation between mind and matter. But the need to get clarity on this question led to the doctrine of a soul separable from the body, then to the assertion of the immortality of this soul, and finally to monotheism. The old materialism was therefore negated by idealism. But in the course of the further development of philosophy, idealism, too, became untenable and was negated by modern materialism. This modern materialism, the negation of the negation, is not the mere re-establishment of the old, but adds to the permanent foundations of this old materialism the whole thought-content of two thousand years of development of philosophy and natural science, as well as of the history of these two thousand years. It is no longer a philosophy at all, but simply a world outlook which has to establish its validity and be applied not in a science of sciences standing apart, but in the real sciences. Philosophy is therefore "sublated" here, that is, "both overcome and preserved"; overcome as regards its form, and preserved as regards its real content. Thus, where Herr Dühring sees only "verbal jugglery", closer inspection reveals an actual content." (Engels 1878 [1947]).

His enthusiasm refused to break the flow of instances. The final one was on Rousseau's doctrine of inequality, characterized as containing an antagonistic contradiction of both progress or "*perfection of the individual man*" and retrogression of the human race; the contradiction intensifies

> "up to the point at which inequality, carried to the utmost extreme, again changes into its opposite, becomes the cause of equality ….. not, however, …. the former naive equality of speechless primitive men, but …. the higher equality of the social contract. The oppressors are oppressed. It is the negation of the negation." (Engels 1878 [1947]).

Then he summed up the law:

> "An extremely general – and for this reason extremely far-reaching and important – law of development of nature, history, and thought; a law which, as we have seen,

> holds good in the animal and plant kingdoms, in geology, in mathematics, in history and in philosophy." (Engels 1878 [1947]),

Interestingly, Engels went on to draw a parallel between Rousseau and Marx in that

> "in Rousseau … we find not only a line of thought which corresponds exactly to the one developed in Marx's *Capital*, but also, in details, a whole series of the same dialectical turns of speech as Marx used: processes which in their nature are antagonistic, contain a contradiction; transformation of one extreme into its opposite; and finally, as the kernel of the whole thing, the negation of the negation" (Engels 1878 [1947]),

even though Rousseau was speaking "sixteen years before Hegel was born".

It should be noted that Plekhanov found Engels' third law of dialectics, the negation of the negation, as superfluous, because it was already contained in the law of the interpenetration of opposites. Moreover, he also changed the order of the remaining two laws of dialectics as given by Engels by giving priority to the law of the interpenetration of opposites over the law of the transition of quantity into quality. This he did with a deliberate view to highlighting the burning truth of universal conflict and contradiction as an inevitable background for a social-political movement based on class struggle.

**Lenin**

Lenin was whole-heartedly quick to copy all of Plekhanov's revisions of dialectical materialism and took them up to the extent of creating a new dialectical materialism, different from that of Engels, such that it has come to be called Leninism. It is interesting to note that he accomplished this in his *Materialism and Empirio-Criticism* in the name of defending Engels' original ideas from misrepresentation by revisionists, especially, the Russian Machians. Lenin was so tactful in expounding his own revisionism with the full Marxian colour and vigour that no one would find any difference from the original doctrines of Marx and Engels. John Plamenatz (1954) aptly writes:

> "Lenin imagined himself the servant of an infallible doctrine which he alone could interpret; and so could afford to be always modest and yet always right. "It is not I but Marx" or "It is not I but Engels who says": these are the unseen beginnings of all his arguments; and their perpetual conclusion: "and therefore I am right"."

Now coming back to Engels, it is quite ironical that in spite of so much hard work and substantial contributions, the posterity cared little to honour this humane genius by crediting to him a place beside Marx; despite his own admission that "I cannot deny that both before and during my 40 years' collaboration with Marx, I had a *certain independent share* in laying the foundation of the theory, and more particularly in its elaboration" (quoted at the outset of this Chapter; Engels 1886 [1970]; emphasis added), the doctrine, however, went on by the name of Marxism, not by Marx-Engelsism, not even by Marxism-Engelsism. His name remained as a simple appendage to Marx, without an independent identity. His unusually submissive humility and unwavering loyalty to Marx (or was he afraid of that aggressive personality?) had umpteen times declared himself as inferior to Marx – "What Marx accomplished I would not have achieved. Marx stood higher, saw further, and took a wider and quicker view than all the rest of us. Marx was a genius; we others were at best talented." (*ibid*.) He had even gone to the extreme of abdicating his "independent share" – "Without him [Marx] the theory would not be by far what it is today. It therefore rightly bears his name." (*ibid*.) And the posterity appears to have taken his words seriously. Even though he had tried during his whole life to fill in the possible Marxian blanks with his writings, he was not accorded a place among the 'founding fathers' of this doctrine. Rather that credit went to Lenin to make up the doctrine by the name of Marxism-Leninism.

Lenin's main contributions to dialectical materialism were the doctrine of *partiinost*, and his dialectical analysis of the theory of knowledge and of matter.

**Partiinost**

As mentioned earlier in a footnote, Lenin found in Plekhanov sufficient justification for highlighting the universal fact of conflict and contradiction as an inevitable background for a social-political movement based on class struggle. From this he derived his doctrine of *partiinost*. Variously defined as 'membership in a political party', or 'party spirit, or partisanship', the term has come to represent an important concept in the communist intellectual life. The doctrine was formulated by Lenin as early as 1895, in the course of a controversy with Peter Berngardovich Struve (1870 –1944; a Russian nonorthodox Marxist reformer-turned liberal and editor), who had in his critique of Narodism quoted the view that

> "there are no insurmountable historical tendencies which, as such, should serve on the one hand as a starting-point, and on the other as unavoidable bounds to the purposeful activity of individuals and social groups" (quoted in Lenin 1894 [1972]).

And Lenin pointed out that

> "That is the language of an objectivist, and not of a Marxist (materialist). Between these conceptions (systems of views) there is a difference, which should be dwelt on, since an incomplete grasp of this difference is one of the fundamental defects of Mr. Struve's book and manifests itself in the majority of his arguments.
>
> "The objectivist speaks of the necessity of a given historical process; the materialist gives an exact picture of the given social-economic formation and of the antagonistic relations to which it gives rise. When demonstrating the necessity for a given series of facts, the objectivist always runs the risk of becoming an apologist for these facts: the materialist discloses the class contradictions and in so doing defines his standpoint. The objectivist speaks of "insurmountable historical tendencies"; the materialist speaks of the class which "directs" the given economic system, giving rise to such and such forms of counteraction by other classes. Thus, on the one hand, the materialist is more consistent than the objectivist, and gives profounder and fuller effect to his objectivism. He does not limit himself to speaking of the necessity of a process, but ascertains exactly what social-economic formation gives the process its content, *exactly what class* determines this necessity. In the present case, for example, the materialist would not content himself with stating the "insurmountable historical tendencies," but would point to the existence of certain classes, which determine the content of the given system and preclude the possibility of any solution except by the action of the producers themselves. On the other hand, materialism includes partisanship, so to speak, and enjoins the direct and open adoption of the standpoint of a definite social group in any assessment of events." (*ibid*.).

Thus started his attack on ideas put forward in the name of *disinterested objectivity*. According to Marxian theory, ideologies in a class-divided society are systems of ideas functioning to defend and to justify class interests. Philosophical systems *are* ideologies in this sense to serve class interests. Bourgeois ideologies, howsoever much they look harmlessly impartial, do stand to promote bourgeois interests; the same story runs for any ideology throughout the history of antagonistic class society: in the slave-owning and the later feudal societies, the ruling class interests predominated in various trends of philosophy and socio-political thought. Against this was the ideological struggle of the interests of the

oppressed classes. The emergence of utopian socialism and Marxism was a reflection of such ideological struggle.

Thus disinterested objectivity in ideology loses its ground in a class-torn society. Anyone with some thinking capacity cannot remain uncommitted to one or the other class, and thus to one or the other ideology, depending upon his interests knowingly or unknowingly. If his interests are in line with the development of society, he falls in the progressive against the reactionary class. With the rise of the proletariat as a revolutionary force and Marxism, as the scientific ideology for social development, no genuine adherent of materialism could remain uncommitted to the proletarian cause; thus Lenin seems to have focussed primarily on the Marxist doctrine of the unity of theory and practice for the establishment of socialism. This means a dialectical materialist is necessarily a socialist, and his world view (theory) is inseparable from his efforts (practice) to promote the proletarian cause. Similarly, a socialist intellectual cannot be indifferent to philosophy, or more precisely, uncommitted to materialism. Thus a true socialist is necessarily a materialist, and a materialist of the right one, the dialectical materialism. This in turn means that *partiinost* is included in dialectical materialism. Thus Lenin did not hesitate to send strong signals to caution the socialist leaders against philosophical idealism contaminating their theory, and this later on led to Stalin's infamous preoccupation in terms of state-control of intellectual activity.

This doctrine of *partiinost* was powerfully expressed in Lenin's *Materialism and Empirio-Criticism: Critical Comments on a Reactionary Philosophy* (1908). He took it into his head that certain members of the Russian Social Democratic party, "Bazarov, Bogdanov, Yushkevich, Valentinov, Chernov and other Machians" (Lenin 1908 [1947]), were actively engaged in spreading essentially idealist views "in the name of "seeking" Marxists" … "under the guise of "proletarian culture"", and he took it upon himself to put them right. These "would-be Marxists", according to him, were adopting, in the name of empirio-criticism, the phenomenalist theories of Ernst Mach and Richard Avenarius. He wrote:

> "All these people could not have been ignorant of the fact that Marx and Engels scores of times termed their philosophical views dialectical materialism. Yet all these people, who, despite the sharp divergence of their political views, are united in their hostility towards dialectical materialism, at the same time claim to be Marxists in philosophy! Engels' dialectics is "mysticism," says Berman. Engels' views have become "antiquated," remarks Bazarov casually, as though it were a self-evident fact.

> Materialism thus appears to be refuted by our bold warriors, who proudly allude to the "modern theory of knowledge," "recent philosophy" (or "recent positivism"), the "philosophy of modern natural science," or even the "philosophy of natural science of the twentieth century." Supported by all these supposedly recent doctrines, our destroyers of dialectical materialism proceed fearlessly to downright fideism…" (Lenin 1908 [1947]).

He continued to dub their attitude

> "typical philosophical revisionism, for it was only the revisionists who gained a sad notoriety for themselves by their departure from the fundamental views of Marxism and by their fear, or inability, to "settle accounts" openly, explicitly, resolutely and clearly with the views they had abandoned." (Lenin 1908 [1947]).

It was to contain this revisionism that he put up the concept of *partiinost* in this work, which in effect became an intolerance approach intended to crush any view held to be dangerous to the party, any revisionism other than his own. This he effected efficiently with the authority of Marxism; he wrote a separate section on "Parties in Philosophy …."; here he reiterated his assertion on the "two great camps" among the philosophers. In the second chapter on "The Theory of Knowledge….", he had already explained it:

> "In his *Ludwig Feuerbach*, Engels declares that the fundamental philosophical trends are materialism and idealism. Materialism regards nature as primary and spirit as secondary; it places being first and thought second. Idealism holds the contrary view. This root distinction between the "two great camps" into which the philosophers of the "various schools" of idealism and materialism are divided Engels takes as the cornerstone, and he directly charges with "confusion" those who use the terms idealism and materialism in any other way." (Lenin *ibid*).

Then in the section on "Parties in Philosophy ….", he traced the struggle between these two camps, materialism and idealism,

> "in connection with every problem of epistemology touched upon and in connection with every philosophical question raised by the new physics….. Behind the mass of new terminological devices, behind the litter of erudite scholasticism, we invariably discerned *two* principal alignments, two fundamental trends in the solution of philosophical problems. Whether nature, matter, the physical, the external world

> should be taken as primary, and consciousness, mind, sensation (experience—as the *widespread* terminology of our time has it), the psychical, etc., should be regarded as secondary—that is the root question which *in fact* continues to divide the philosophers into *two great camps*. The source of thousands upon thousands of errors and of the confusion reigning in this sphere is the fact that beneath the envelope of terms, definitions, scholastic devices and verbal artifices, these two fundamental trends are *overlooked*." (Lenin *ibid*).

He argued that all the "philosophical utterances" of both Marx and Engels did "revolve within these two fundamental opposites". It was self-delusion or hypocrisy to expect a possible disinterested third party in philosophy. And he continued to admit:

> "Marx and Engels were partisans in philosophy from start to finish; they were able to detect the deviations from materialism and concessions to idealism and fideism in each and every one of the "recent" trends.".

One of his main purposes in bringing out this work was to correlate the historical struggle between these two philosophical camps with the class struggle between the exploited and the exploiters. However, thought control process was not an immediate agenda of the October Revolution; in fact in his struggle for capturing and keeping the state power, Lenin welcomed into his party and tolerated many intellectuals who were at loggerheads with him ideologically, even though from day one itself the Soviet State repressed political opposition, both physical and theoretical, and non-political thought too. The state of lull with Lenin's broad sense of the concept of party-mindedness continued till 1929, Stalin's 'year of the great break', when he complained that the intellectuals were not serving the party adequately; he therefore demanded complete subjection of intellectual life to continuous direct control by the Central Committee.

Thus started the era of the Big Brother.

**Lenin's Epistemology: Knowledge and Matter**

Besides the doctrine of *partiinost*, Lenin's main contribution to dialectical materialism was his dialectical analysis of the theory of knowledge and the nature of matter, as discussed in *Materialism and Empirio-Criticism*.

As already implied, the primitive character of Engels' epistemology had left many a blank that in the background of the developments in atomic physics around the turn of the 20th century stood to contribute significantly to the rise of revisionist movements within Russian Marxism under the garb of empirio-criticism. Lenin felt challenged to counter their epistemological contentions. It should be noted that his monograph contains no explicit section dealing directly with the philosophy of nature; but he touched upon the subject to such an extent that he distinguished (in chapter five: 'The Recent Revolution of Natural Science and Philosophical Idealism', following the book *The Physical Theory of the Modern Physicists* of Abel Rey, a French "writer on philosophical problems") between a "philosophical" and a "scientific" conception of matter. The former is concerned with the distinction between materialism and idealism while the latter deals just with the "structure of matter" (atoms and sub-atomic particles), that is, the decisive aspect of the former, philosophical conception of matter, is not the identification of matter with elementary particles, but the recognition of matter as objective reality, existing "independently of our consciousness, independently of our perceptions, outside of us". He put forward two more "important epistemological conclusions":

> (i) "There is definitely no difference in principle between the phenomenon and the thing-in-itself, and there can be no such difference. The only difference is between what is known and what is not yet known."
>
> And (ii) "In the theory of knowledge, as in every other branch of science, we must think dialectically, that is, we must not regard our knowledge as ready-made and unalterable, but must determine how *knowledge* emerges from *ignorance*, how incomplete, inexact knowledge becomes more complete and more exact." (*ibid*.)

What follows according to him is that

> "dialectical materialism insists on the approximate, relative character of every scientific theory of the structure of matter and its properties; it insists on the absence of absolute boundaries in nature",

that is,

> "[t]he "essence" of things, or "substance," is *also* relative; it expresses only the degree of profundity of man's knowledge of objects; and while yesterday the profundity of this knowledge did not go beyond the atom, and today does not go beyond the

> electron and ether, dialectical materialism insists on the temporary, relative, approximate character of all these *milestones* in the knowledge of nature gained by the progressing science of man.".

Thus for Lenin, the concept of matter "epistemologically implies *nothing but* objective reality existing independently of the human mind and reflected by it". Based on this conception he was then able to refute (in chapter five, section two) the argument of the "disappearance of matter", that as "atom dematerialises … matter disappears", giving way to electricity. Joseph Diner-Denes had in an article in *Die Neue Zeit* (1906-07) already answered to this argument pointing out that "light and electricity are only manifestations of one and the same force of nature". Following him, Lenin explained that

> ""Matter disappears" means that the limit within which we have hitherto known matter is vanishing and that our knowledge is penetrating deeper; properties of matter are likewise disappearing which formerly seemed absolute, immutable, and primary (impenetrability, inertia, mass, etc.) and which are now revealed to be relative and characteristic only of certain states of matter.".

As usual, Lenin here invoked an example given by Engels of the discovery of alizarin in coal tar in the context of his criticism of mechanical materialism. He asked:

> "What is the kernel of Engels' objections? Yesterday we did not know that coal tar contained alizarin. Today we learned that it does. The question is, did coal tar contain alizarin yesterday?
>
> "Of course it did. To doubt it would be to make a mockery of modern science."

Hence he was prompted to ask:

> "Do electrons, ether *and so on* exist as objective realities outside the human mind or not? The scientists will also have to answer this question unhesitatingly; and they do invariably answer it in the *affirmative*, just as they unhesitatingly recognise that nature existed prior to man and prior to organic matter. Thus, the question is decided in favour of materialism."

This in essence was his "philosophical" account of matter, in contrast to the "scientific" conception of matter, which changes as scientific knowledge advances. In Lenin's view, the question of whether something exists outside and independently of our consciousness must be

separated from the question of how it exists and what its structure must be. The relativity of our knowledge about the structure of matter by no means contradicts our acceptance of an objective reality, while the philosophical conception of that structure yields an orientation for further scientific research. That is, the philosophical conception of matter remains unaffected as the scientific view of it changes from atomist theories to theories of electromagnetism. He argued that the electromagnetic theory of matter is no less materialistic than atomic theories and indeed it is in closer accord with dialectical materialism. So he asserted that "[m]odern physics is in travail; it is giving birth to dialectical materialism".

The dialectical approach of Engels and Lenin that the development of science occurs through the progressive passage of some theories into more general and deeper ones, qualitatively different from the earlier, was closely followed by all the Soviet philosophers of science (for example, see Omelyanovsky 1979). This dialectics is marked by a continuous process of disappearance of certain basic concepts and appearance of new basic concepts in which the earlier absolute or invariant concepts undergo a kind of relativisation and become aspects of new absolute or invariant concepts in a more general theory. Thus it is argued that in the theory of relativity, for instance, the concepts of absolute space and absolute time accepted in the classical mechanics disappeared, and relativistic concepts of space and time became established; they represent the aspects of one of the most important invariants in the theory of relativity – the four-dimensional time which represents a special 'continuum' of space and time. Similarly, in quantum mechanics the absolute nature of the corpuscular and wave concepts inherent in them in the classical theory was lost, and they have become relative ones, as aspects of a broader concept of a particle with certain invariant characteristics.

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